

Test mode : 802.11ax(HE80) / SISO(ANT1)

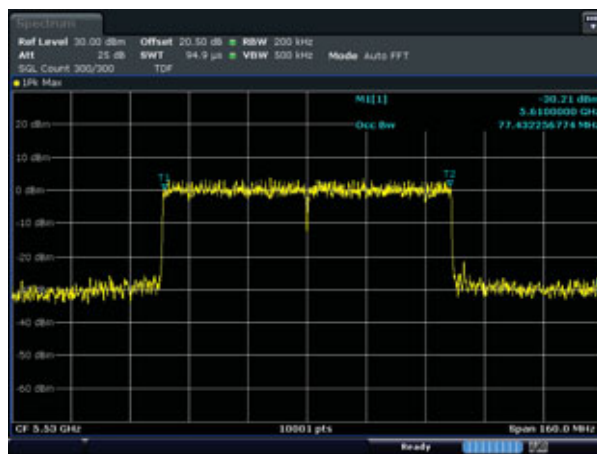
5210MHz



5290MHz



5530MHz



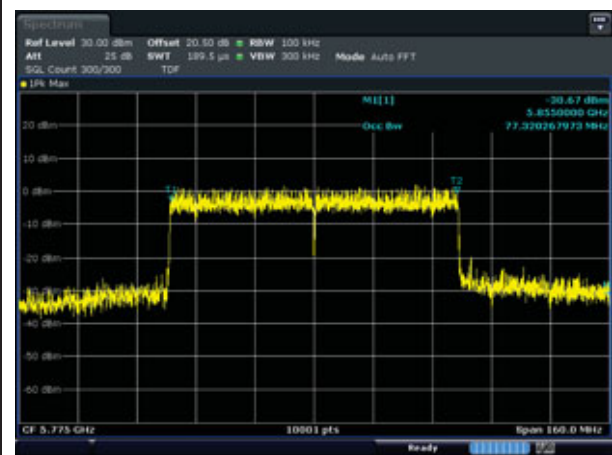
5610MHz



5690MHz



5775MHz

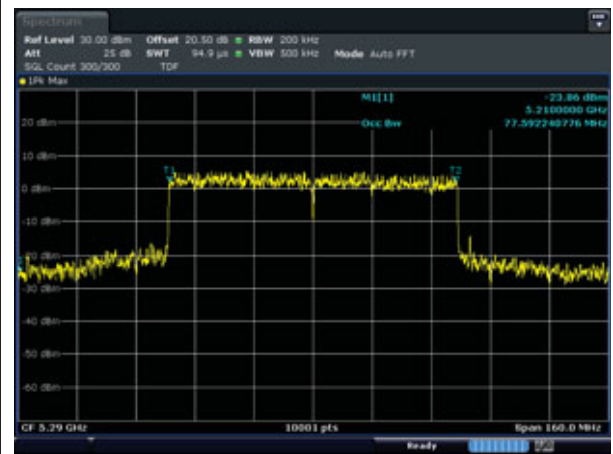


Test mode : 802.11ax(HE80) / SISO(ANT2)

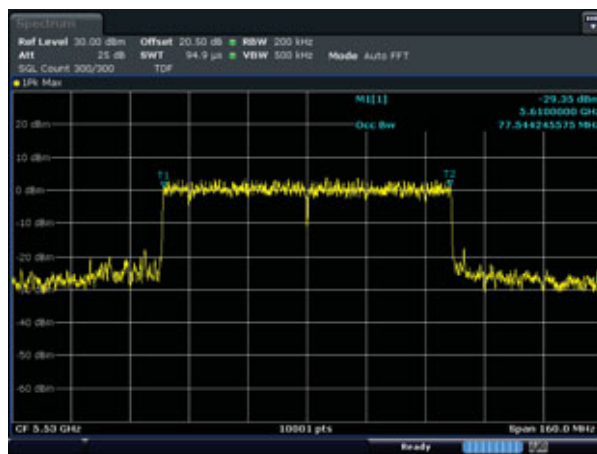
5210MHz



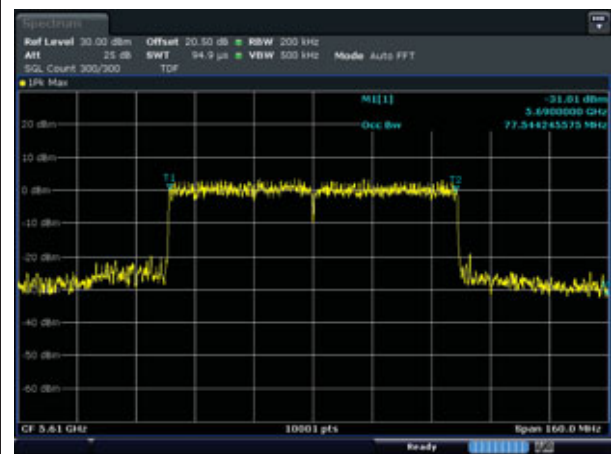
5290MHz



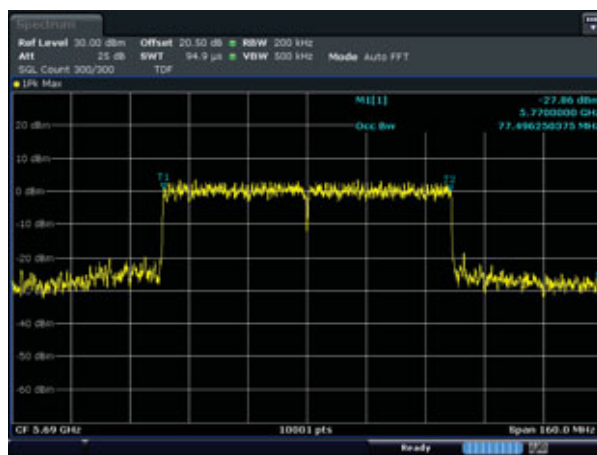
5530MHz



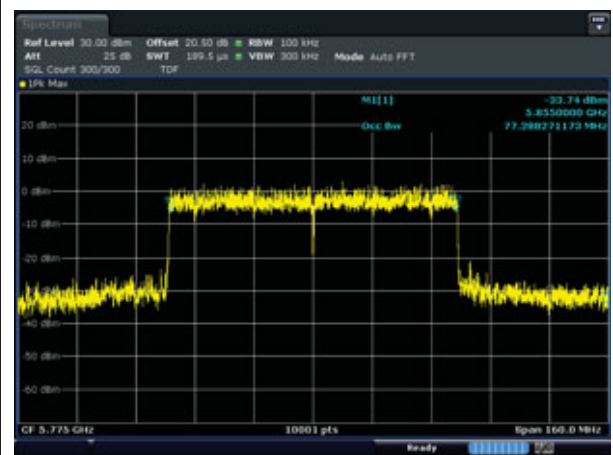
5610MHz



5690MHz



5775MHz



Test mode : 802.11ax(HE80) / MIMO

5210MHz



5290MHz



5530MHz



5610MHz



5690MHz



5775MHz



4.3.5 Frequency Stability

4.3.5.1 Regulation

According to §15.407(i) (g) Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

According to §RSS-GEN 6.11 Frequency stability is a measure of frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at an appropriate reference temperature and the rated supply voltage.

When the measurement method of transmitter frequency stability is not stated in the applicable RSS or reference standards, the following conditions apply:

- (a) The reference temperature for radio transmitters is +20°C (+68°F).
- (b) A hand-held device that is only capable of operating using internal batteries shall be tested at the battery's nominal voltage, and again at the battery's operating end-point voltage, which shall be specified by the equipment manufacturer. For this test, either a battery or an external power supply can be used.
- (c) The operating carrier frequency shall be set up in accordance with the manufacturer's published operation and instruction manual prior to the commencement of these tests. No adjustment of any frequency-determining circuit element shall be made subsequent to this initial set-up.

With the transmitter installed in an environmental test chamber, the unmodulated carrier frequency and frequency stability shall be measured under the conditions specified below for licensed and licence-exempt devices, unless specified otherwise in the applicable RSS. A sufficient stabilization period at each temperature shall be used prior to each frequency measurement.

4.3.5.2 Measurement Procedure

The frequency stability of the carrier frequency of the intentional radiator shall be maintained all conditions of normal operation as specified in the users manual. The frequency stability shall be maintained over a temperature variation of specified in the users manual at normal supply voltage, and over a variation in the primary supply voltage of specified in the users manual of the rated supply voltage at a temperature of 20 °C. For equipment that is capable only of operating from a battery, the frequency stability tests shall be performed using a new battery without any further requirement to vary supply voltage

1. The EUT was placed inside the environmental test chamber.
2. The temperature was incremented by 10 °C intervals from lowest temperature.
3. Each increase step of temperature measured the frequency.
4. The test temperature was set 20°C and the supply voltage was then adjusted on the EUT from 85 % to 115% and the frequency record.

4.3.5.3 Result

Comply (measurement data : refer to the next page)

4.3.5.4 Measurement data

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5180 MHz	-20	5179 779 000	-0.004
	-10	5179 740 000	-0.005
	0	5179 878 000	-0.002
	10	5179 755 000	-0.005
	20	5179 814 000	-0.004
	30	5179 813 000	-0.004
	40	5179 707 000	-0.006
	50	5179 744 000	-0.005
	Voltage(%)		
	85	5179 894 000	-0.002
	115	5179 758 000	-0.005

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5200 MHz	-20	5199 912 000	-0.002
	-10	5199 926 000	-0.001
	0	5199 926 000	-0.001
	10	5199 879 000	-0.002
	20	5199 930 000	-0.001
	30	5199 903 000	-0.002
	40	5199 886 000	-0.002
	50	5199 927 000	-0.001
	Voltage(%)		
	85	5199 884 000	-0.002
	115	5199 936 000	-0.001

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5240 MHz	-20	5239 824 000	-0.003
	-10	5239 839 000	-0.003
	0	5239 989 000	0.000
	10	5239 914 000	-0.002
	20	5239 678 000	-0.006
	30	5239 922 000	-0.001
	40	5239 862 000	-0.003
	50	5239 868 000	-0.003
	Voltage(%)		
	85	5239 883 000	-0.002
	115	5239 861 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5260 MHz	-20	5259 813 000	-0.004
	-10	5259 954 000	-0.001
	0	5259 773 000	-0.004
	10	5259 836 000	-0.003
	20	5260 064 000	0.001
	30	5259 814 000	-0.004
	40	5259 941 000	-0.001
	50	5259 727 000	-0.005
	Voltage(%)		
	85	5259 986 000	0.000
	115	5259 905 000	-0.002

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5280 MHz	-20	5279 960 000	-0.001
	-10	5279 995 000	0.000
	0	5279 762 000	-0.005
	10	5279 717 000	-0.005
	20	5279 864 000	-0.003
	30	5279 751 000	-0.005
	40	5279 770 000	-0.004
	50	5279 796 000	-0.004
	Voltage(%)		
	85	5279 965 000	-0.001
	115	5279 727 000	-0.005

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5320 MHz	-20	5319 821 000	-0.003
	-10	5319 937 000	-0.001
	0	5319 935 000	-0.001
	10	5319 727 000	-0.005
	20	5319 916 000	-0.002
	30	5319 919 000	-0.002
	40	5319 808 000	-0.004
	50	5319 737 000	-0.005
	Voltage(%)		
	85	5319866000	-0.003
	115	5319987000	0.000

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5500 MHz	-20	5499 845 000	-0.003
	-10	5499 911 000	-0.002
	0	5499 788 000	-0.004
	10	5499 928 000	-0.001
	20	5499 942 000	-0.001
	30	5499 921 000	-0.001
	40	5499 806 000	-0.004
	50	5499 975 000	0.000
	Voltage(%)		
	85	5499 789 000	-0.004
	115	5499 849 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5600 MHz	-20	5599 738 000	-0.005
	-10	5599 746 000	-0.005
	0	5599 873 000	-0.002
	10	5599 793 000	-0.004
	20	5599 660 000	-0.006
	30	5599 737 000	-0.005
	40	5599 936 000	-0.001
	50	5599 785 000	-0.004
	Voltage(%)		
	85	5599 930 000	-0.001
	115	5599 820 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5700 MHz	-20	5699 720 000	-0.005
	-10	5699 991 000	0.000
	0	5699 748 000	-0.004
	10	5699 998 000	0.000
	20	5699 972 000	0.000
	30	5699 808 000	-0.003
	40	5699 747 000	-0.004
	50	5699 956 000	-0.001
	Voltage(%)		
	85	5699 867 000	-0.002
	115	5699 845 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5745 MHz	-20	5744 888 000	-0.002
	-10	5744 892 000	-0.002
	0	5744 895 000	-0.002
	10	5744 763 000	-0.004
	20	5744 970 000	-0.001
	30	5744 855 000	-0.003
	40	5744 722 000	-0.005
	50	5744 778 000	-0.004
	Voltage(%)		
	85	5744 836 000	-0.003
	115	5744 918 000	-0.001

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5785 MHz	-20	5785 337 000	0.006
	-10	5785 272 000	0.005
	0	5785 390 000	0.007
	10	5785 114 000	0.002
	20	5785 022 000	0.000
	30	5785 120 000	0.002
	40	5785 373 000	0.006
	50	5785 259 000	0.004
	Voltage(%)		
	85	5785 317 000	0.005
	115	5785 420 000	0.007

Test mode : 20 MHz Bandwidth / SISO(ANT1)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5825 MHz	-20	5825 393 000	0.007
	-10	5825 236 000	0.004
	0	5825 272 000	0.005
	10	5825 112 000	0.002
	20	5824 904 000	-0.002
	30	5825 325 000	0.006
	40	5825 392 000	0.007
	50	5825 243 000	0.004
	Voltage(%)		
	85	5825 278 000	0.005
	115	5825 152 000	0.003

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5180 MHz	-20	5179 848 000	-0.003
	-10	5179 742 000	-0.005
	0	5179 889 000	-0.002
	10	5179 655 000	-0.007
	20	5179 874 000	-0.002
	30	5179 825 000	-0.003
	40	5179 777 000	-0.004
	50	5179 784 000	-0.004
	Voltage(%)		
	85	5179 891 000	-0.002
	115	5179 858 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5200 MHz	-20	5199 992 000	0.000
	-10	5199 966 000	-0.001
	0	5199 934 000	-0.001
	10	5199 823 000	-0.003
	20	5199 944 000	-0.001
	30	5199 967 000	-0.001
	40	5199 817 000	-0.004
	50	5199 937 000	-0.001
	Voltage(%)		
	85	5199 824 000	-0.003
	115	5199 916 000	-0.002

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5240 MHz	-20	5239 834 000	-0.003
	-10	5239 834 000	-0.003
	0	5239 979 000	0.000
	10	5239 984 000	0.000
	20	5239 918 000	-0.002
	30	5239 913 000	-0.002
	40	5239 889 000	-0.002
	50	5239 868 000	-0.003
	Voltage(%)		
	85	5239 887 000	-0.002
	115	5239 835 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5260 MHz	-20	5259 884 000	-0.002
	-10	5259 962 000	-0.001
	0	5259 748 000	-0.005
	10	5259 896 000	-0.002
	20	5259 812 000	-0.004
	30	5259 898 000	-0.002
	40	5259 961 000	-0.001
	50	5259 787 000	-0.004
	Voltage(%)		
	85	5259 996 000	0.000
	115	5259 965 000	-0.001

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5280 MHz	-20	5279 960 000	-0.001
	-10	5279 995 000	0.000
	0	5279 862 000	-0.003
	10	5279 797 000	-0.004
	20	5279 722 000	-0.005
	30	5279 728 000	-0.005
	40	5279 771 000	-0.004
	50	5279 796 000	-0.004
	Voltage(%)		
	85	5279 966 000	-0.001
	115	5279 737 000	-0.005

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5320 MHz	-20	5319 878 000	-0.002
	-10	5319 995 000	0.000
	0	5319 995 000	0.000
	10	5319 758 000	-0.005
	20	5319 747 000	-0.005
	30	5319 936 000	-0.001
	40	5319 818 000	-0.003
	50	5319 728 000	-0.005
	Voltage(%)		
	85	5319 896 000	-0.002
	115	5319 917 000	-0.002

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5500 MHz	-20	5499 848 000	-0.003
	-10	5499 917 000	-0.002
	0	5499 888 000	-0.002
	10	5499 901 000	-0.002
	20	5499 767 000	-0.004
	30	5499 936 000	-0.001
	40	5499 856 000	-0.003
	50	5499 918 000	-0.001
	Voltage(%)		
	85	5499 776 000	-0.004
	115	5499 892 000	-0.002

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5600 MHz	-20	5599 748 000	-0.005
	-10	5599 741 000	-0.005
	0	5599 862 000	-0.002
	10	5599 893 000	-0.002
	20	5599 831 000	-0.003
	30	5599 768 000	-0.004
	40	5599 936 000	-0.001
	50	5599 815 000	-0.003
	Voltage(%)		
	85	5599 936 000	-0.001
	115	5599 836 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5700 MHz	-20	5699 747 000	-0.004
	-10	5699 990 000	0.000
	0	5699 751 000	-0.004
	10	5699 918 000	-0.001
	20	5699 616 000	-0.007
	30	5699 888 000	-0.002
	40	5699 767 000	-0.004
	50	5699 977 000	0.000
	Voltage(%)		
	85	5699 847 000	-0.003
	115	5699 849 000	-0.003

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5745 MHz	-20	5744 836 000	-0.003
	-10	5744 871 000	-0.002
	0	5744 819 000	-0.003
	10	5744 766 000	-0.004
	20	5744 932 000	-0.001
	30	5744 819 000	-0.003
	40	5744 772 000	-0.004
	50	5744 772 000	-0.004
	Voltage(%)		
	85	5744 816 000	-0.003
	115	5744 948 000	-0.001

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5785 MHz	-20	5785 357 000	0.006
	-10	5785 368 000	0.006
	0	5785 018 000	0.000
	10	5785 194 000	0.003
	20	5785 092 000	0.002
	30	5785 136 000	0.002
	40	5785 319 000	0.006
	50	5785 247 000	0.004
	Voltage(%)		
	85	5785 337 000	0.006
	115	5785 428 000	0.007

Test mode : 20 MHz Bandwidth / SISO(ANT2)

Frequency (MHz)	Temp (°C)	Center Frequency (Hz)	Tolerance (%)
5825 MHz	-20	5825 318 000	0.005
	-10	5825 272 000	0.005
	0	5825 206 000	0.004
	10	5825 192 000	0.003
	20	5825 144 000	0.002
	30	5825 365 000	0.006
	40	5825 370 000	0.006
	50	5825 213 000	0.004
	Voltage(%)		
	85	5825 262 000	0.004
	115	5825 118 000	0.002

4.3.6 Spurious Emission, Band Edge, and Restricted bands

4.3.6.1 Regulation

According to §15.407(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

According to §RSS-247 6.2.1.2 For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

According to §RSS-247 6.2.2.2 a) All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p.; or

b) All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device, except devices installed in vehicles, shall be labelled or include in the user manual the following text "for indoor use only."

According to §RSS-247 6.2.3.2 Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, devices with bandwidth overlapping the band edge of 5725 MHz can meet the emission limit of -27 dBm/MHz e.i.r.p. at 5850 MHz instead of 5725 MHz.

According to §RSS-247 6.2.4.2 Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

According to §15.209(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009 - 0.490	2 400/F(kHz)	300
0.490 - 1.705	24 000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 MHz, 76–88 MHz, 174–216 MHz or 470–806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

According to §15.205(a) and (b), only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.009 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.694 75 - 16.695 25	608 - 614	5.35 - 5.46
2.173 5 - 2.190 5	16.804 25 - 16.804 75	960 – 1 240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1 300 – 1 427	8.025 - 8.5
4.177 25 - 4.177 75	37.5 - 38.25	1 435 – 1 626.5	9.0 - 9.2
4.207 25 - 4.207 75	73 - 74.6	1 645.5 – 1 646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1 660 – 1 710	10.6 - 12.7
6.267 75 - 6.268 25	108 - 121.94	1 718.8 – 1 722.2	13.25 - 13.4
6.311 75 - 6.312 25	123 - 138	2 200 – 2 300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2 310 – 2 390	15.35 - 16.2
8.362 - 8.366	156.524 75 - 156.525 25	2 483.5 – 2 500	17.7 - 21.4

8.376 25 - 8.386 75	156.7 - 156.9	2 690 – 2 900	22.01 - 23.12
8.414 25 - 8.414 75	162.012 5 - 167.17	3 260 – 3 267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3 332 – 3 339	31.2 - 31.8
12.519 75 - 12.520 25	240 - 285	3 345.8 – 3 358	36.43 - 36.5
12.576 75 - 12.577 25	322 - 335.4	3 600 – 4 400	Above 38.6
13.36 - 13.41			

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurement

According to RSS-GEN 8.10(c) Unwanted emissions that do not fall within the restricted frequency bands listed in table 7 shall comply either with the limits specified in the applicable RSS or with those specified in table 5 and table 6.

MHz	MHz	MHz	GHz
0.009 - 0.110	13.36 – 13.41	960 – 1427	9.0 – 9.2
0.495 - 0.505	16.42 – 16.423	1435 – 1626.5	9.3 – 9.5
2.173 5 - 2.190 5	16.69475 – 16.69525	1660 – 1710	10.6 – 12.7
3.020 – 3.026	16.80425 - 16.80475	1718.8 – 1722.2	13.25 – 13.4
4.125 – 4.128	25.5 – 25.67	2200 – 2300	14.47 – 14.5
4.17725 – 1.17775	37.5 – 38.25	2310 - 2390	15.35 – 16.2
4.20725 – 4.20775	73 – 74.6	2483.5 – 2500	17.7 – 21.4
5.677 – 5.683	74.8 – 75.2	2655 – 2900	22.01 – 23.12
6.215 – 6.218	108 – 138	3260 – 3267	23.6 – 24.0
6.266775 – 6.26825	149.9 – 150.05	3332 – 3339	31.2 – 31.8
6.31175 – 6.31225	156.52475 – 156.52525	3345.8 - 3358	36.43 – 36.5
8.291 – 8.294	156.7 – 156.9	3500 – 4400	Above 38.6
8.363 – 8.366	162.0125 – 167.17	4500 – 5150	-
8.37625 – 8.38675	167.75 – 173.2	5350 – 5460	-
8.41425 – 8.41475	240 – 285	7250 - 7750	-
12.29 – 12.293	322 – 335.4	8025 – 8500	-
12.51975 – 12.52025	399.9 – 410	-	-
12.57675 – 12.57725	608 – 614	-	-

4.3.6.2 Measurement Procedure

These test measurement settings are specified in section G of 789033 D02 General UNII Test Procedures

For all radiated emissions tests, measurements must correspond to the direction of maximum emission level for each measured emission (see ANSI C63.10 for guidance).

4.3.6.2.1 Unwanted Emissions in the Restricted Bands & Outside of the Restricted Bands

- (1) For all measurements, follow the requirements in section II.G.3., "General Requirements for Unwanted Emissions Measurements".
- (2) At frequencies below 1000 MHz, use the procedure described in section II.G.4., "Procedure for Unwanted Emissions Measurements Below 1000 MHz".
- (3) At frequencies above 1000 MHz, measurements performed using the peak and average measurement procedures described in sections II.G.5. and II.G.6, respectively, must satisfy the respective peak and average limits. If all peak measurements satisfy the average limit, then average measurements are not required.

(4) Unwanted Emissions that fall Outside of the Restricted Bands

As specified in §15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in §15.407(b)(4)).

However, an out-of-band emission that complies with both the peak and average limits of §15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

a) If radiated measurements are performed, field strength is then converted to EIRP as follows:

(i) $EIRP = ((E \cdot d)^2) / 30$

where: • E is the field strength in V/m;

• d is the measurement distance in meters;

• EIRP is the equivalent isotropically radiated power in watts.

(ii) Working in dB units, the above equation is equivalent to:

$$EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$$

(iii) or, if d is 3 meters:

$$EIRP[dBm] = E[dB\mu V/m] - 95.2$$

4.3.6.2.2 Radiated Spurious Emissions

- 1) The preliminary and final radiated measurements were performed to determine the frequency producing the maximum emissions in at a 10m anechoic chamber. The EUT was tested at a distance 3 meters.
- 2) The EUT was placed on the top of the 0.8-meter height, 1 × 1.5 meter non-metallic table. To find the maximum emission levels, the height of a measuring antenna was changed and the turntable was rotated 360°.
- 3) The antenna polarization was also changed from vertical to horizontal. The spectrum was scanned from 9 kHz to 30 MHz using the loop antenna, and from 30 to 1 000 MHz using the TRILOG broadband antenna, and from 1 000 MHz to 40 000 MHz using the horn antenna.
- 4) Each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector function with specified bandwidth.
- 5) For multiple antennas, the maximum simultaneous operating conditions were declared the worst case condition. The test was performed under the worst condition.

NOTE1 : The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1 GHz.

NOTE2 : The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1 GHz.

The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz(1/T) for Average detection (AV) at frequency above 1 GHz. (where T = pulse width)

4.3.6.3 Note

- Below 1GHz

Note 1 : Measured the worst case. * Refer to 3.4

Note 2 : Loss : Cable loss - Amp gain

Note 3 : Result : Reading + Ant Factor + Loss

Note 4 : Measured distance : 3 m

- Above 1GHz

Note 1 : Measured the worst case. * Refer to 3.4

Note 2 : Factor : Ant Factor + Cable loss - Amp gain + Distance Factor

Note 3 : Peak Result : Reading + Factor

Note 4 : Average Result : Average Reading + Factor + Average Factor

Note 5 : Average Factor : $10\log(1/\text{Duty cycle})$ * Refer to 4.3.6.6

Note 6 : Measured distance : 1 m, Distance Factor = $20\log(1/3) = -9.54$

Note 7 : Average measurement did not take place because the peak data did not exceed Average Limit.

Note 8 : Not Detected means that peak data does not exceed the average limit.

4.3.6.4 Result

Comply (measurement data : refer to the next page)

4.3.6.5 Measurement data

Test mode : Below 1 GHz

(Worst case : 2.4GHz(802.11ax(HE40) / MIMO_2452 MHz) + 5GHz(802.11n(HT20) / MIMO_5825 MHz)

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Ant Factor (dB)	Loss (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
57.28	QP	V	41.40	19.50	-28.90	32.00	40.00	8.00
154.76	QP	V	37.40	19.50	-27.60	29.30	43.50	14.20
185.68	QP	H	35.60	17.20	-27.40	25.40	43.50	18.10
437.51	QP	V	35.10	23.00	-26.40	31.70	46.00	14.30
625.11	QP	H	31.70	26.60	-26.10	32.20	46.00	13.80

Test mode : 802.11a / SISO(ANT1) 5180 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5137.88	PK	H	68.90	0.80	-	69.66	74.00	4.34
	AV	H	47.20	0.80	1.25	49.21	54.00	4.79
5148.38	PK	V	70.00	0.80	-	70.76	74.00	3.24
	AV	V	49.60	0.80	1.25	51.61	54.00	2.39

Test mode : 802.11a / SISO(ANT1) 5200 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5144.00	PK	H	57.50	0.80	-	58.26	74.00	15.74
	AV	H	39.60	0.80	1.25	41.61	54.00	12.39
5148.38	PK	V	60.80	0.80	-	61.56	74.00	12.44
	AV	V	41.80	0.80	1.25	43.81	54.00	10.19

Test mode : 802.11a / SISO(ANT1) 5240 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5260 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5280 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5320 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5350.50	PK	H	65.50	1.40	-	66.86	74.00	7.14
	AV	H	45.10	1.40	1.25	47.71	54.00	6.29
5351.38	PK	V	70.00	1.40	-	71.36	74.00	2.64
	AV	V	49.80	1.40	1.25	52.41	54.00	1.59

Test mode : 802.11a / SISO(ANT1) 5500 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5457.25	PK	V	66.10	1.70	-	67.76	74.00	6.24
	AV	V	45.90	1.70	1.25	48.81	54.00	5.19
5459.00	PK	H	61.60	1.80	-	63.36	74.00	10.64
	AV	H	41.20	1.80	1.25	44.21	54.00	9.79

Test mode : 802.11a / SISO(ANT1) 5600 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5700 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5745 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5785 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT1) 5825 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5457.25	PK	V	66.10	1.70	-	67.76	74.00	6.24
	AV	V	45.90	1.70	1.25	48.81	54.00	5.19

Test mode : 802.11a / SISO(ANT2) 5180 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5147.50	PK	V	66.10	0.80	-	66.86	74.00	7.14
	AV	V	51.80	0.80	1.25	53.81	54.00	0.19
5149.25	PK	H	61.70	0.80	-	62.46	74.00	11.54
	AV	H	46.90	0.80	1.25	48.91	54.00	5.09

Test mode : 802.11a / SISO(ANT2) 5200 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5240 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5260 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5280 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5353.13	PK	V	58.20	1.40	-	59.56	74.00	14.44
	AV	V	44.10	1.40	1.25	46.71	54.00	7.29

Test mode : 802.11a / SISO(ANT2) 5320 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5351.38	PK	V	69.90	1.40	-	71.26	74.00	2.74
	AV	V	50.20	1.40	1.25	52.81	54.00	1.19
5354.00	PK	H	61.40	1.40	-	62.76	74.00	11.24
	AV	H	43.60	1.40	1.25	46.21	54.00	7.79

Test mode : 802.11a / SISO(ANT2) 5500 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5457.25	PK	H	56.80	1.70	-	58.46	74.00	15.54
	AV	H	40.00	1.70	1.25	42.91	54.00	11.09
5459.00	PK	V	65.80	1.80	-	67.56	74.00	6.44
	AV	V	47.20	1.80	1.25	50.21	54.00	3.79

Test mode : 802.11a / SISO(ANT2) 5600 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5700 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5745 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5785 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11a / SISO(ANT2) 5825 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5180 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5147.50	PK	V	64.60	0.80	-	65.36	74.00	8.64
	AV	V	51.00	0.80	1.95	53.71	54.00	0.29
5148.38	PK	H	62.80	0.80	-	63.56	74.00	10.44
	AV	H	48.20	0.80	1.95	50.91	54.00	3.09

Test mode : 802.11n(HT20) / MIMO 5200 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5139.63	PK	H	56.00	0.80	-	56.76	74.00	17.24
	AV	H	43.20	0.80	1.95	45.91	54.00	8.09
5146.63	PK	V	57.70	0.80	-	58.46	74.00	15.54
	AV	V	45.10	0.80	1.95	47.81	54.00	6.19

Test mode : 802.11n(HT20) / MIMO 5240 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5260 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5280 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5320 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5352.25	PK	V	63.60	1.40	-	64.96	74.00	9.04
	AV	V	40.50	1.40	1.95	43.81	54.00	10.19
5353.13	PK	H	61.50	1.40	-	62.86	74.00	11.14
	AV	H	38.90	1.40	1.95	42.21	54.00	11.79

Test mode : 802.11n(HT20) / MIMO 5500 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5455.50	PK	V	59.20	1.70	-	60.86	74.00	13.14
	AV	V	39.40	1.70	1.95	43.01	54.00	10.99
5457.25	PK	H	55.20	1.70	-	56.86	74.00	17.14
	AV	H	34.60	1.70	1.95	38.21	54.00	15.79

Test mode : 802.11n(HT20) / MIMO 5600 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5700 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5745 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5785 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT20) / MIMO 5825 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT40) / MIMO 5190 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5144.00	PK	H	60.90	0.80	-	61.66	74.00	12.34
	AV	H	42.50	0.80	2.57	45.83	54.00	8.17
5148.38	PK	V	66.10	0.80	-	66.86	74.00	7.14
	AV	V	48.90	0.80	2.57	52.23	54.00	1.77

Test mode : 802.11n(HT40) / MIMO 5230 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT40) / MIMO 5270 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT40) / MIMO 5310 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5350.50	PK	H	63.30	1.40	-	64.66	74.00	9.34
	AV	H	41.90	1.40	2.57	45.83	54.00	8.17
5353.13	PK	V	70.30	1.40	-	71.66	74.00	2.34
	AV	V	48.10	1.40	2.57	52.03	54.00	1.97

Test mode : 802.11n(HT40) / MIMO 5510 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5458.13	PK	V	66.80	1.70	-	68.46	74.00	5.54
	AV	V	46.20	1.70	2.57	50.43	54.00	3.57
5458.13	PK	H	61.80	1.70	-	63.46	74.00	10.54
	AV	H	41.10	1.70	2.57	45.33	54.00	8.67

Test mode : 802.11n(HT40) / MIMO 5590 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT40) / MIMO 5670 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT40) / MIMO 5755 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11n(HT40) / MIMO 5795 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5984.71	PK	V	50.70	2.50	-	53.16	74.00	20.84
	AV	V	28.60	2.50	2.57	33.63	54.00	20.37

Test mode : 802.11ac(VHT20) / MIMO_5180 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5144.00	PK	V	65.10	0.80	-	65.86	74.00	8.14
	AV	V	48.30	0.80	2.02	51.08	54.00	2.92
5149.25	PK	H	61.10	0.80	-	61.86	74.00	12.14
	AV	H	44.00	0.80	2.02	46.78	54.00	7.22

Test mode : 802.11ac(VHT20) / MIMO_5200 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5240 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5260 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5280 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5320 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5354.88	PK	V	62.90	1.40	-	64.26	74.00	9.74
	AV	V	43.60	1.40	2.02	46.98	54.00	7.02
5354.88	PK	H	59.50	1.40	-	60.86	74.00	13.14
	AV	H	40.00	1.40	2.02	43.38	54.00	10.62

Test mode : 802.11ac(VHT20) / MIMO_5500 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5458.13	PK	V	61.00	1.70	-	62.66	74.00	11.34
	AV	V	43.20	1.70	2.02	46.88	54.00	7.12
5459.00	PK	H	57.00	1.80	-	58.76	74.00	15.24
	AV	H	38.10	1.80	2.02	41.88	54.00	12.12

Test mode : 802.11ac(VHT20) / MIMO_5600 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5700 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5745 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5785 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT20) / MIMO_5825 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT40) / MIMO_5190 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5144.00	PK	H	63.90	0.80	-	64.66	74.00	9.34
	AV	H	43.80	0.80	2.70	47.26	54.00	6.74
5145.75	PK	V	68.10	0.80	-	68.86	74.00	5.14
	AV	V	48.30	0.80	2.70	51.76	54.00	2.24

Test mode : 802.11ac(VHT40) / MIMO_5230 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT40) / MIMO_5270 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT40) / MIMO_5310 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5350.50	PK	H	63.30	1.40	-	64.66	74.00	9.34
	AV	H	41.90	1.40	2.57	45.83	54.00	8.17
5353.13	PK	V	70.30	1.40	-	71.66	74.00	2.34
	AV	V	48.10	1.40	2.57	52.03	54.00	1.97

Test mode : 802.11ac(VHT40) / MIMO_5510 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5458.13	PK	V	66.80	1.70	-	68.46	74.00	5.54
	AV	V	46.20	1.70	2.57	50.43	54.00	3.57
5458.13	PK	H	61.80	1.70	-	63.46	74.00	10.54
	AV	H	41.10	1.70	2.57	45.33	54.00	8.67

Test mode : 802.11ac(VHT40) / MIMO_5590 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT40) / MIMO_5670 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT40) / MIMO_5755 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT40) / MIMO_5795 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5984.71	PK	V	50.70	2.50	-	53.16	74.00	20.84
	AV	V	28.60	2.50	2.57	33.63	54.00	20.37

Test mode : 802.11ac(VHT80) / MIMO_5210 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5130.00	PK	H	62.80	0.70	-	63.46	74.00	10.54
	AV	H	44.90	0.70	3.06	48.62	54.00	5.38
5143.13	PK	V	66.40	0.80	-	67.16	74.00	6.84
	AV	V	48.50	0.80	3.06	52.32	54.00	1.68

Test mode : 802.11ac(VHT80) / MIMO_5290 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5351.38	PK	H	62.80	1.40	-	64.16	74.00	9.84
	AV	H	42.60	1.40	3.06	47.02	54.00	6.98
5362.75	PK	V	68.20	1.40	-	69.56	74.00	4.44
	AV	V	47.60	1.40	3.06	52.02	54.00	1.98

Test mode : 802.11ac(VHT80) / MIMO_5530 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5452.88	PK	H	61.60	1.70	-	63.26	74.00	10.74
	AV	H	40.20	1.70	3.06	44.92	54.00	9.08
5457.25	PK	V	68.60	1.70	-	70.26	74.00	3.74
	AV	V	45.50	1.70	3.06	50.22	54.00	3.78

Test mode : 802.11ac(VHT80) / MIMO_5610 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT80) / MIMO_5690 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ac(VHT80) / MIMO_5775 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5976.60	PK	V	56.40	2.50	-	58.86	74.00	15.14
	AV	V	33.60	2.50	3.06	39.12	54.00	14.88

Test mode : 802.11ax(HE20) / MIMO 5180 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5143.13	PK	H	63.50	0.80	-	64.26	74.00	9.74
	AV	H	47.10	0.80	1.72	49.58	54.00	4.42
5149.25	PK	V	66.20	0.80	-	66.96	74.00	7.04
	AV	V	50.30	0.80	1.72	52.78	54.00	1.22

Test mode : 802.11ax(HE20) / MIMO 5200 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5145.75	PK	V	56.60	0.80	-	57.36	74.00	16.64
	AV	V	36.90	0.80	1.72	39.38	54.00	14.62

Test mode : 802.11ax(HE20) / MIMO 5240 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO 5260 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO 5280 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO 5320 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5350.50	PK	V	66.70	1.40	-	68.06	74.00	5.94
	AV	V	46.20	1.40	1.72	49.28	54.00	4.72
5350.50	PK	H	60.60	1.40	-	61.96	74.00	12.04
	AV	H	40.80	1.40	1.72	43.88	54.00	10.12

Test mode : 802.11ax(HE20) / MIMO_5500 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5455.50	PK	V	65.40	1.70	-	67.06	74.00	6.94
	AV	V	36.10	1.70	1.72	39.48	54.00	14.52
5456.38	PK	H	59.70	1.70	-	61.36	74.00	12.64
	AV	H	31.20	1.70	1.72	34.58	54.00	19.42

Test mode : 802.11ax(HE20) / MIMO_5600 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO_5700 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO_5745 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO_5785 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE20) / MIMO_5825 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE40) / MIMO_5190 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5146.63	PK	V	69.60	0.80	-	70.36	74.00	3.64
	AV	V	47.10	0.80	1.75	49.61	54.00	4.39
5148.38	PK	H	66.60	0.80	-	67.36	74.00	6.64
	AV	H	43.60	0.80	1.75	46.11	54.00	7.89

Test mode : 802.11ax(HE40) / MIMO_5230 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE40) / MIMO_5270 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE40) / MIMO_5310 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5354.00	PK	V	69.80	1.40	-	71.16	74.00	2.84
	AV	V	47.60	1.40	1.75	50.71	54.00	3.29
5354.88	PK	H	63.10	1.40	-	64.46	74.00	9.54
	AV	H	44.90	1.40	1.75	48.01	54.00	5.99

Test mode : 802.11ax(HE40) / MIMO_5510 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5458.13	PK	V	66.60	1.70	-	68.26	74.00	5.74
	AV	V	45.80	1.70	1.75	49.21	54.00	4.79
5459.88	PK	H	62.10	1.80	-	63.86	74.00	10.14
	AV	H	41.90	1.80	1.75	45.41	54.00	8.59

Test mode : 802.11ax(HE40) / MIMO_5590 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE40) / MIMO_5670 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE40) / MIMO_5755 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE40) / MIMO_5795 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE80) / MIMO_5210 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5138.75	PK	V	69.30	0.80	-	70.06	74.00	3.94
	AV	V	47.90	0.80	1.75	50.41	54.00	3.59
5146.63	PK	H	64.20	0.80	-	64.96	74.00	9.04
	AV	H	44.20	0.80	1.75	46.71	54.00	7.29

Test mode : 802.11ax(HE80) / MIMO_5290 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5367.13	PK	V	67.80	1.50	-	69.26	74.00	4.74
	AV	V	46.20	1.50	1.75	49.41	54.00	4.59
5372.38	PK	H	59.90	1.50	-	61.36	74.00	12.64
	AV	H	38.90	1.50	1.75	42.11	54.00	11.89

Test mode : 802.11ax(HE80) / MIMO_5530 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5446.75	PK	V	68.40	1.60	-	69.96	74.00	4.04
	AV	V	47.90	1.60	1.75	51.21	54.00	2.79
5457.25	PK	H	61.50	1.70	-	63.16	74.00	10.84
	AV	H	43.10	1.70	1.75	46.51	54.00	7.49

Test mode : 802.11ax(HE80) / MIMO_5610 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE80) / MIMO_5690 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
			Not Detected					

Test mode : 802.11ax(HE80) / MIMO_5775 MHz

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Dutycycle Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5976.15	PK	V	56.00	2.50	-	58.46	74.00	15.54
	AV	V	36.20	2.50	1.75	40.41	54.00	13.59

Test mode : Simultaneous operation

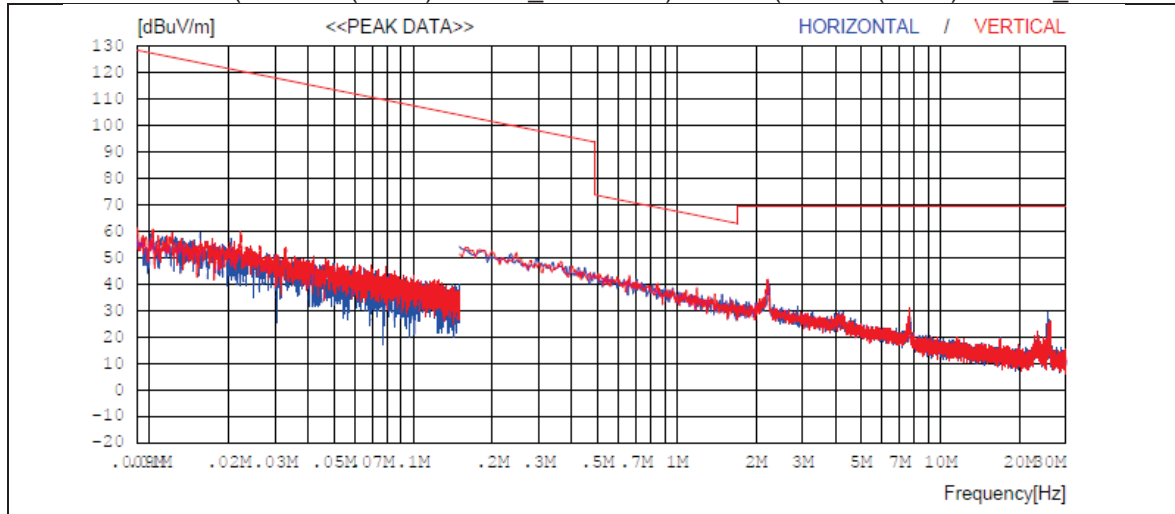
(Worst case : 2.4GHz(802.11ax(HE40) / MIMO_2452 MHz) + 5GHz(802.11n(HT20) / MIMO_5825 MHz)

Frequency (MHz)	Detector	Pol. (V/H)	Reading (dBμV)	Factor (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1099.89	PK	H	53.80	-11.70	42.06	74.00	31.94
	AV	H	36.20	-11.70	24.46	54.00	29.54
2338.75	PK	H	49.80	-4.70	45.06	74.00	28.94
	AV	H	32.10	-4.70	27.36	54.00	26.64
2546.88	PK	V	31.50	-3.70	27.76	74.00	46.24
	AV	V	49.40	-3.70	45.66	54.00	8.34
4823.88	PK	V	52.40	1.50	53.86	74.00	20.14
	AV	V	30.30	1.50	31.76	54.00	22.24
5866.25	PK	H	53.00	4.40	57.36	74.00	16.64
	AV	H	24.30	4.40	28.66	54.00	25.34

4.3.6.6 Measurement Plot

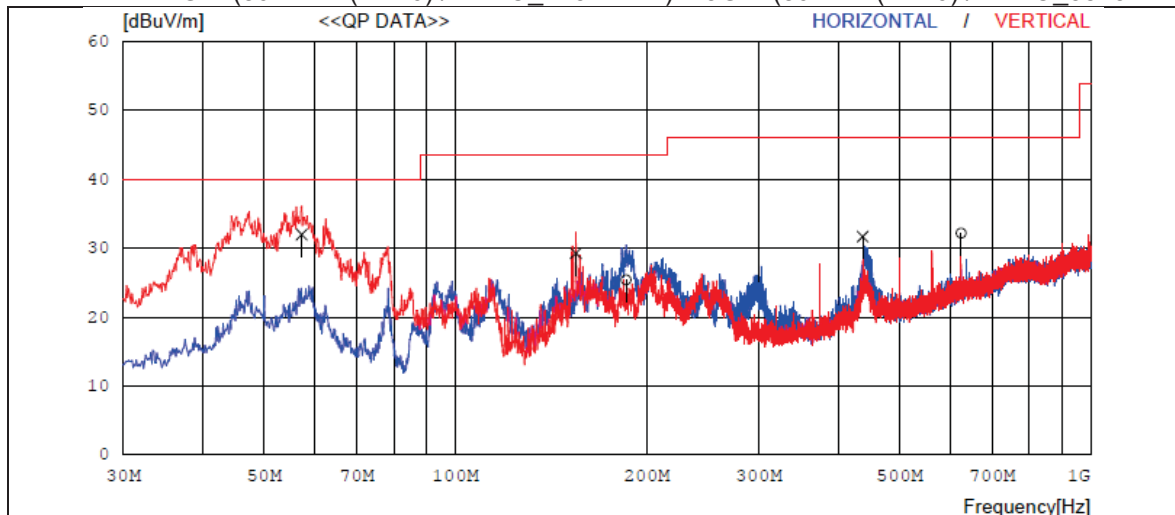
Test mode : 9 kHz ~ 30 MHz

(Worst case : 2.4GHz(802.11ax(HE40) / MIMO_2452 MHz) + 5GHz(802.11n(HT20) / MIMO_5825 MHz)

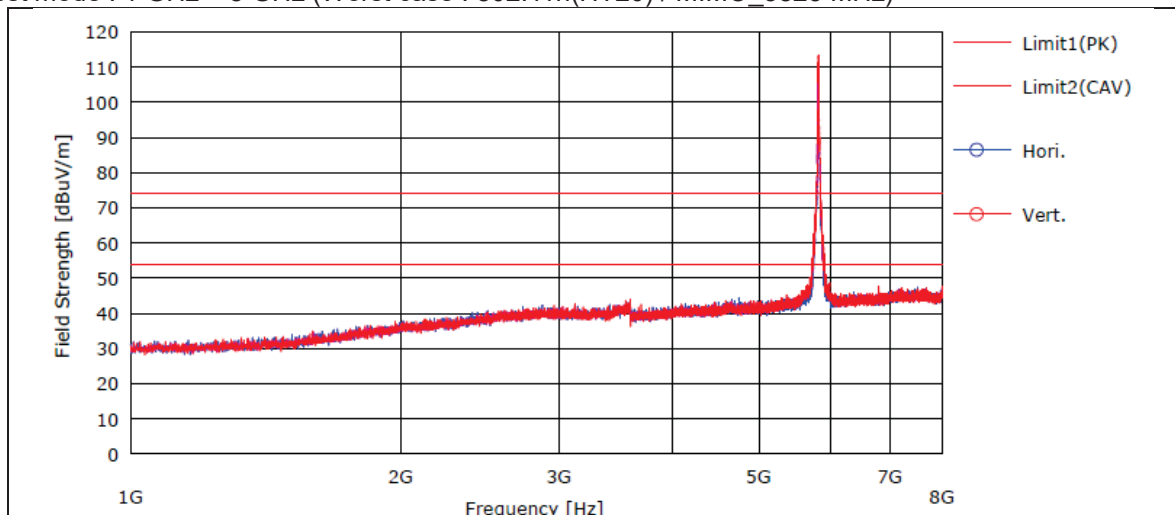


Test mode : 30 MHz ~ 1 GHz

(Worst case : 2.4GHz(802.11ax(HE40) / MIMO_2452 MHz) + 5GHz(802.11n(HT20) / MIMO_5825 MHz)



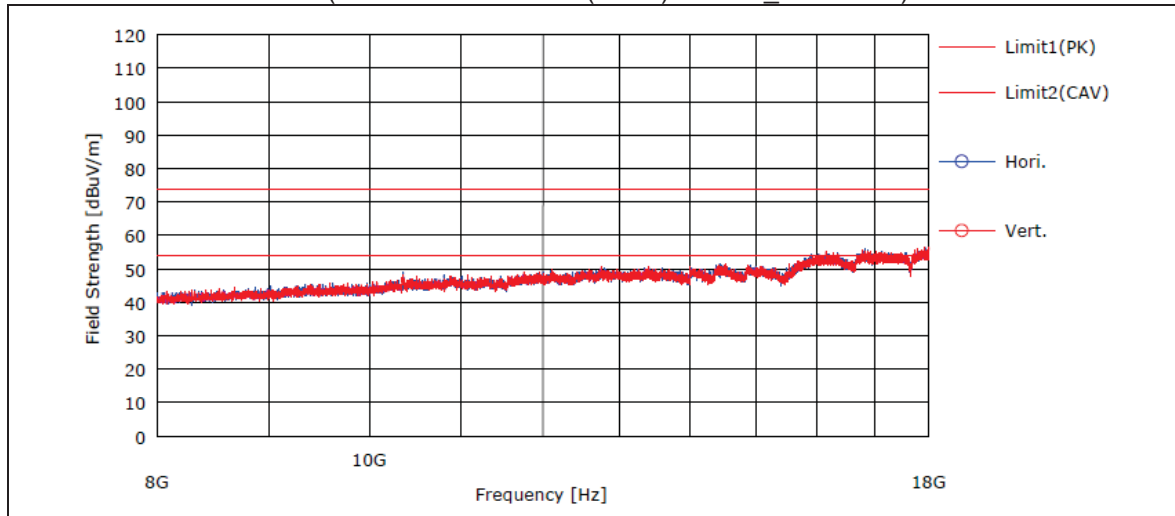
Test mode : 1 GHz ~ 8 GHz (Worst case : 802.11n(HT20) / MIMO_5825 MHz)



Note 1 : Measured distance : 1 m

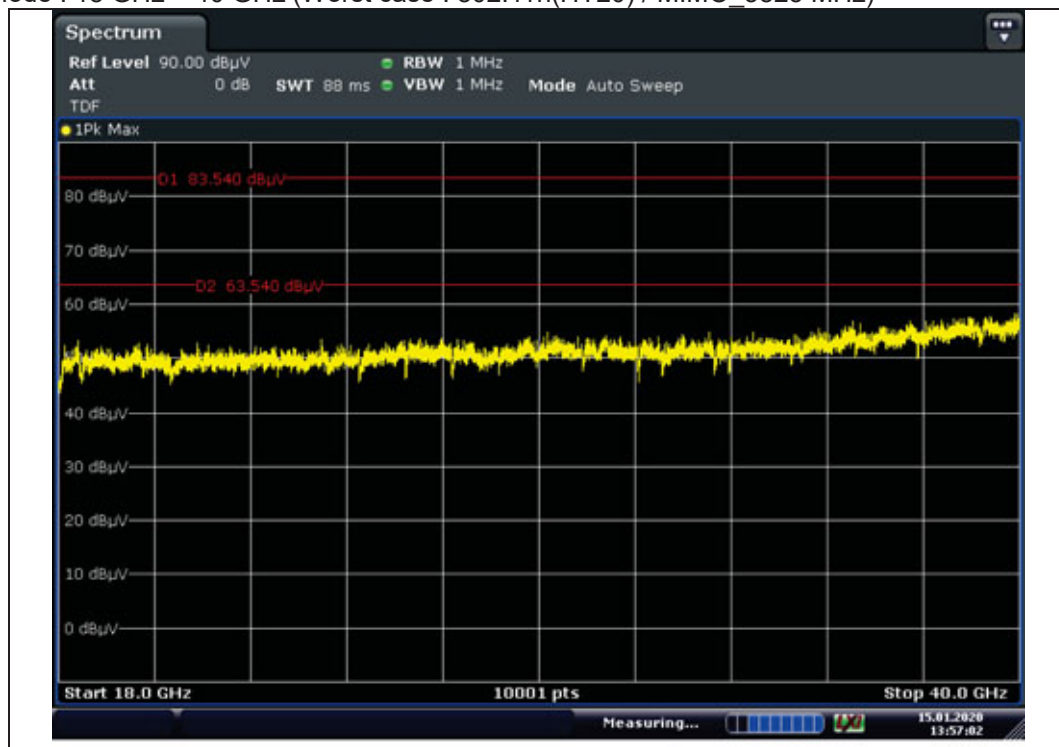
Note 2 : Limit : Peak : 74 dBuV/m, Average : 54 dBuV/m

Test mode : 8 GHz ~ 18 GHz (Worst case : 802.11n(HT20) / MIMO_5825 MHz)



Note 1 : Measured distance : 1 m
Note 2 : Limit : Peak : 74 dBuV/m, Average : 54 dBuV/m

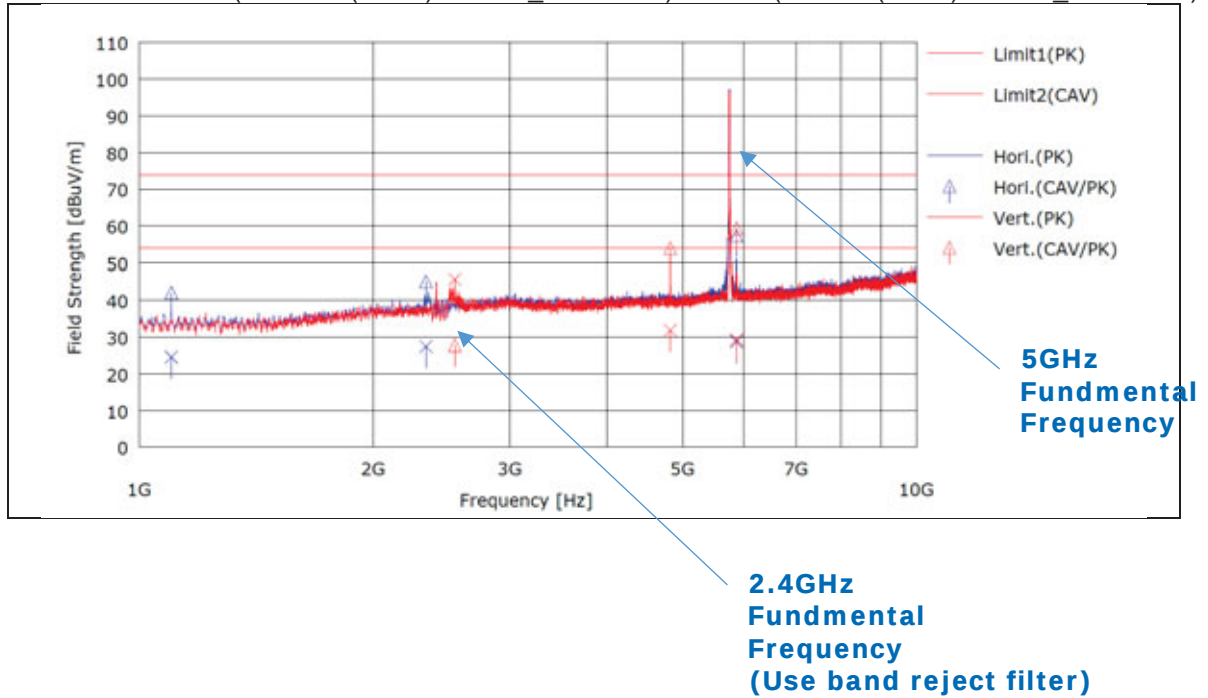
Test mode : 18 GHz ~ 40 GHz (Worst case : 802.11n(HT20) / MIMO_5825 MHz)



NOTE 1 : Measured distance : 1 m
NOTE 2 : Limit : Peak : 83.54 dBuV/m, Average : 63.54 dBuV/m

Test mode : 1 GHz ~ 10 GHz

(Worst case : 2.4GHz(802.11ax(HE40) / MIMO 2452 MHz) + 5GHz(802.11n(HT20) / MIMO 5825 MHz)

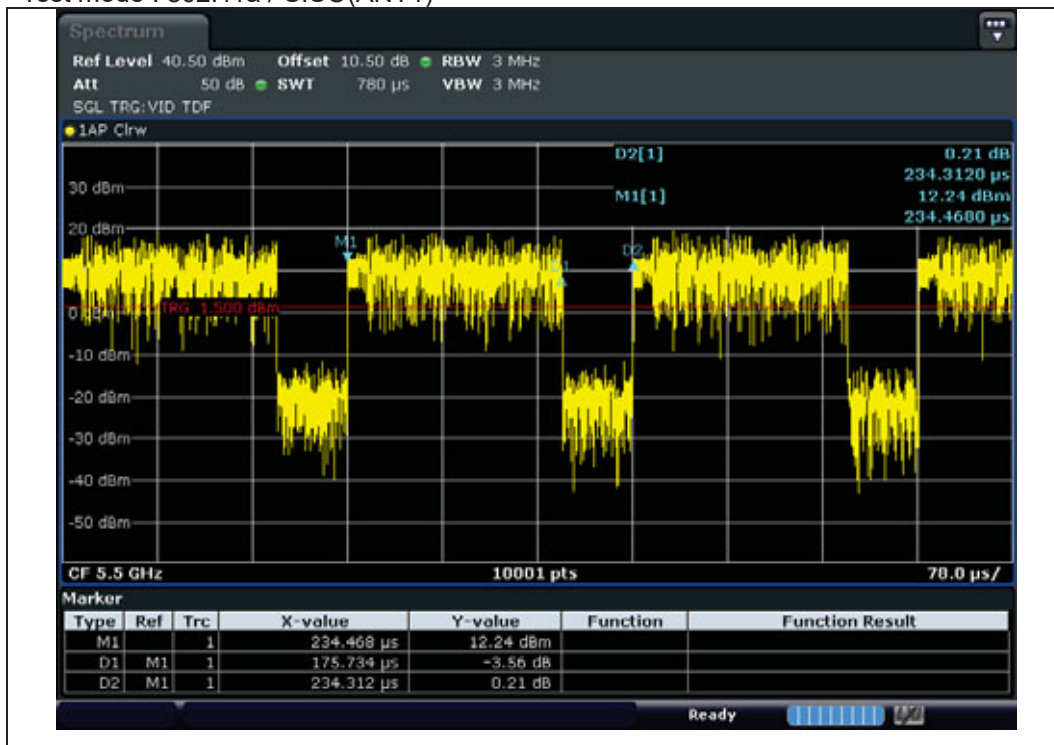


Test mode : Bandedge (Worst case : 802.11n(HT20) / MIMO 5825 MHz)



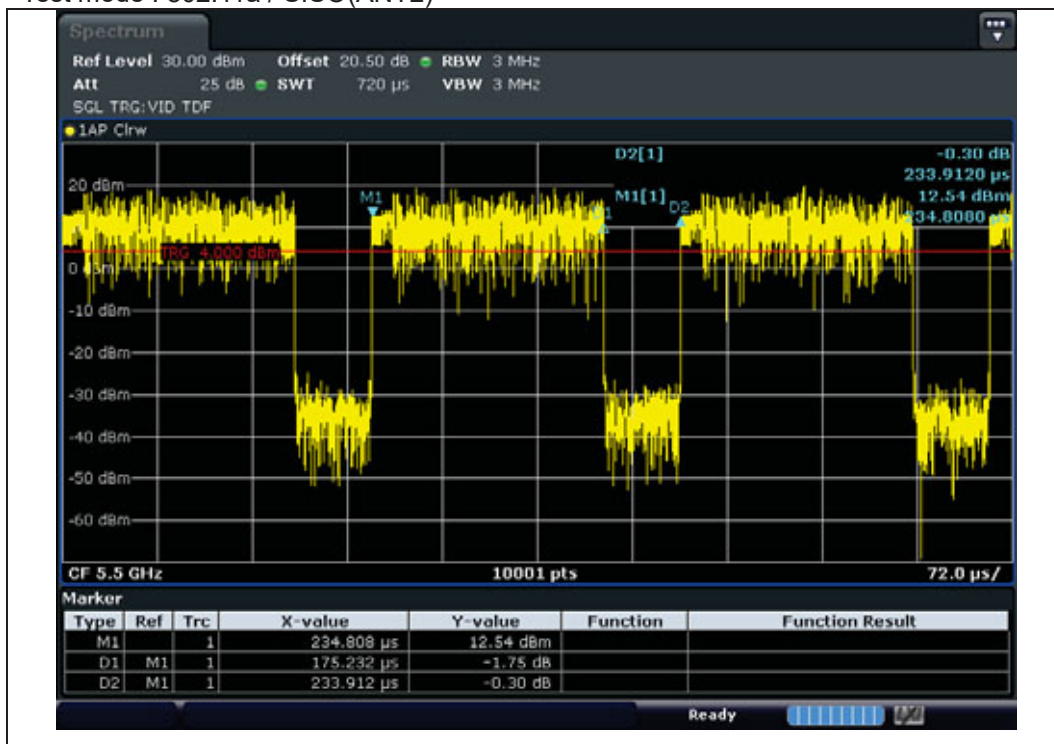
4.3.6.7 Measurement Plot_Dutycycle

Test mode : 802.11a / SISO(ANT1)



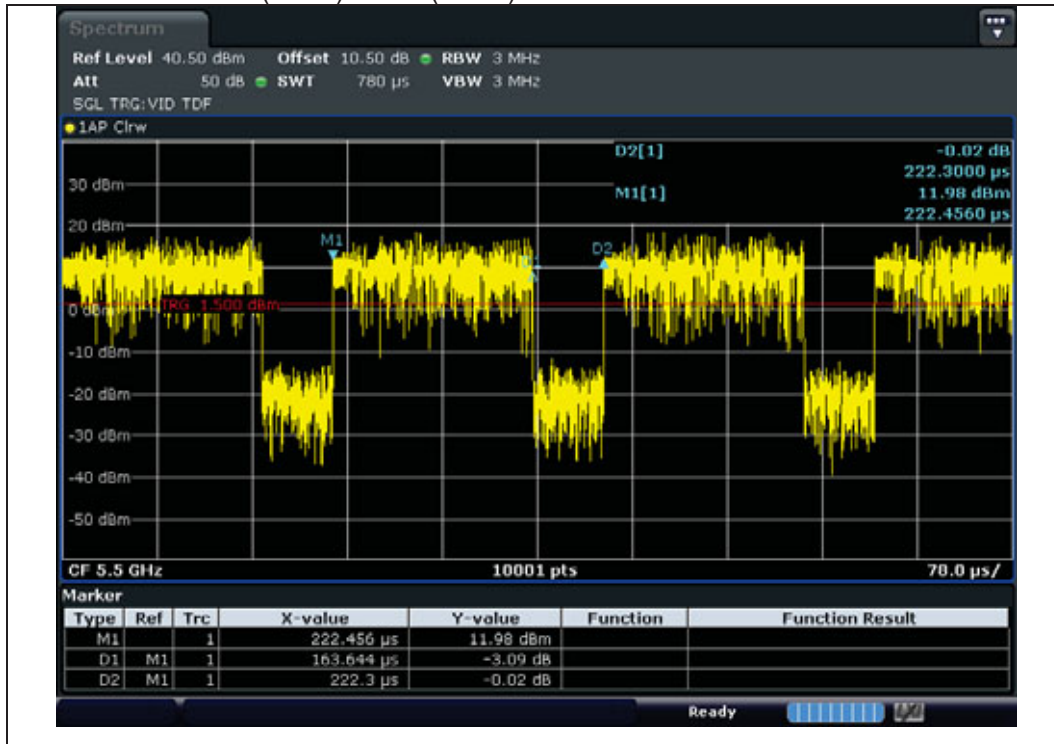
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.25$ dB

Test mode : 802.11a / SISO(ANT2)



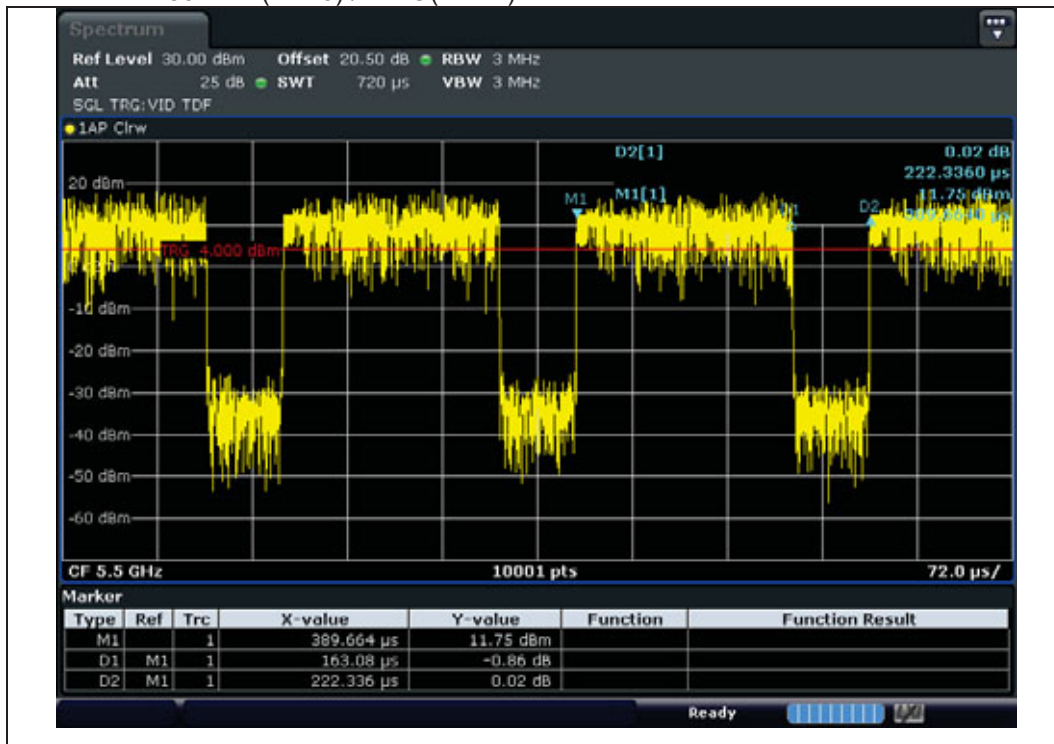
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.25$ dB

Test mode : 802.11n(HT20) / SISO(ANT1)



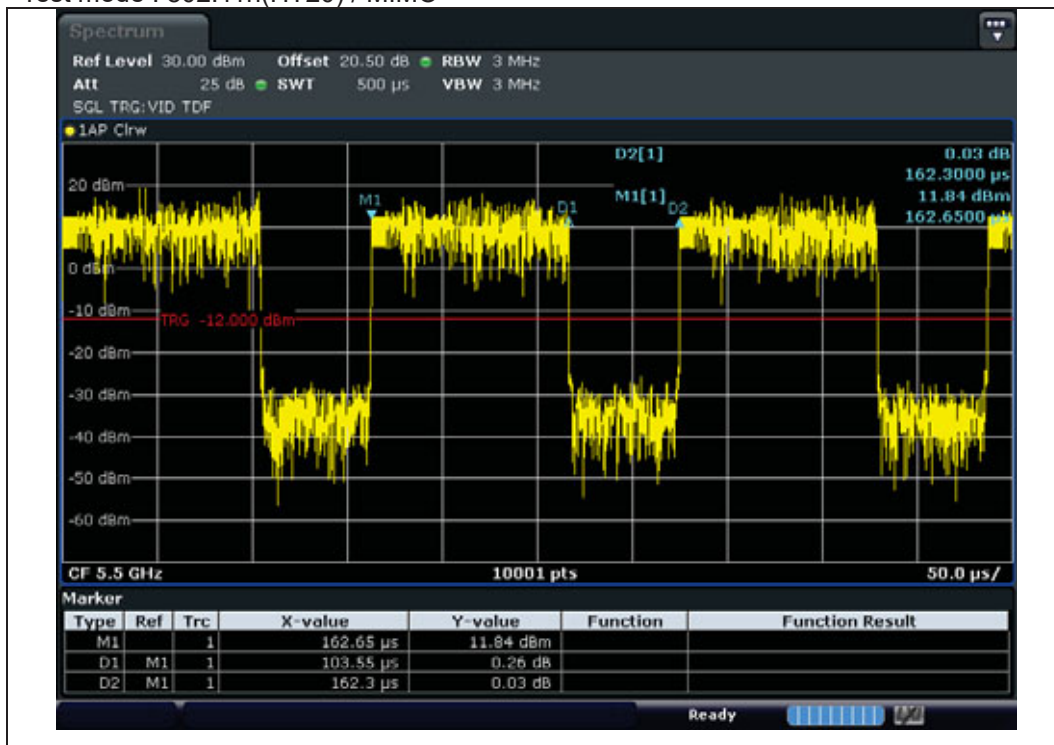
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.33 \text{ dB}$

Test mode : 802.11n(HT20) / SISO(ANT2)



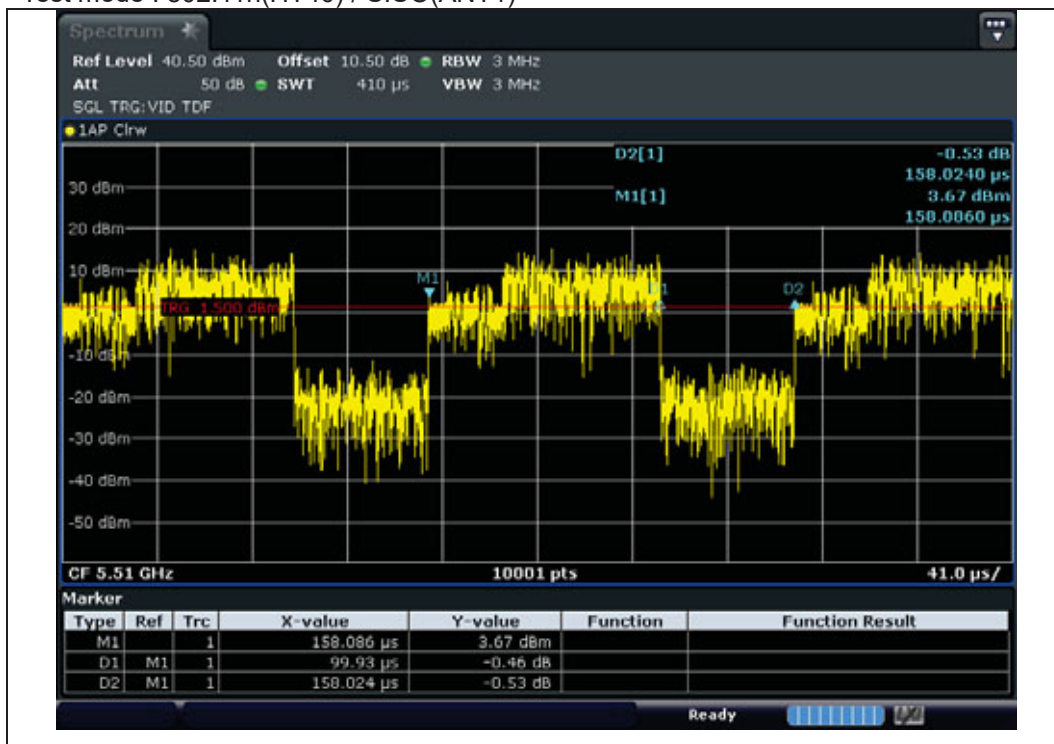
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.35 \text{ dB}$

Test mode : 802.11n(HT20) / MIMO



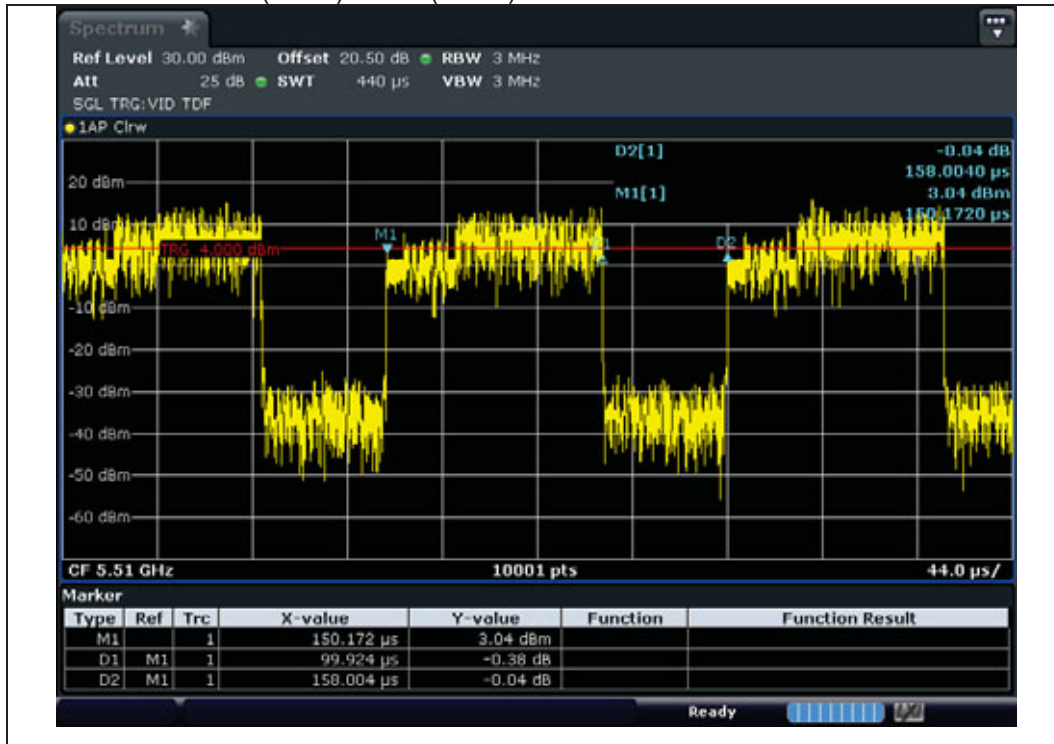
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.95$ dB

Test mode : 802.11n(HT40) / SISO(ANT1)



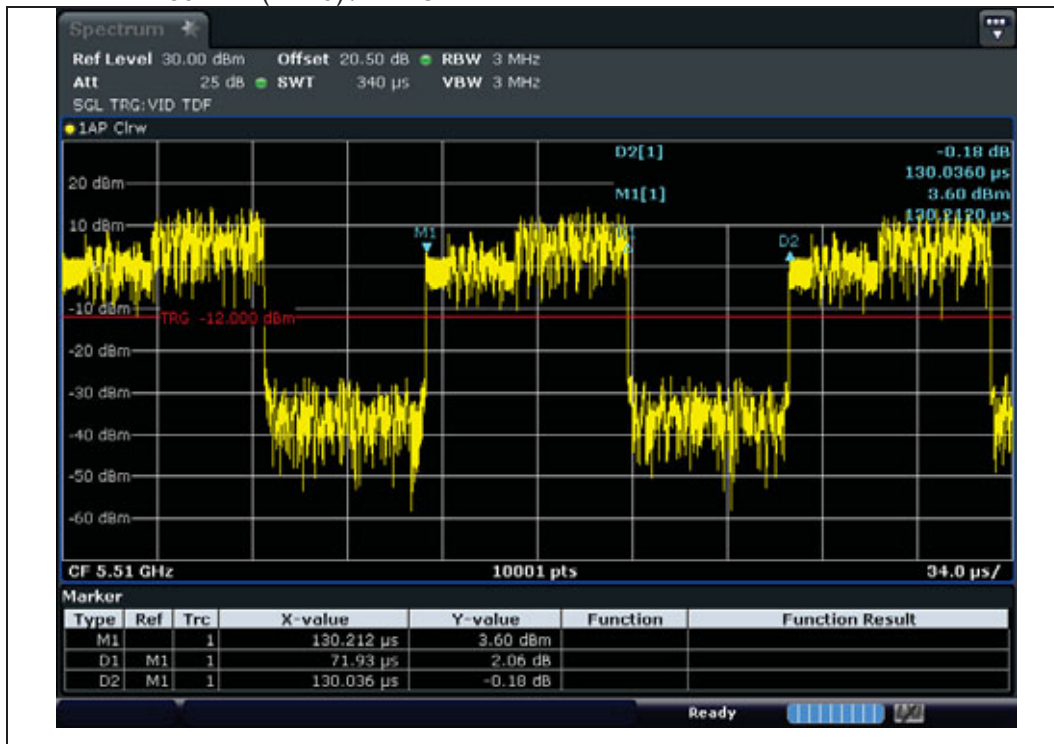
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.99$ dB

Test mode : 802.11n(HT40) / SISO(ANT2)



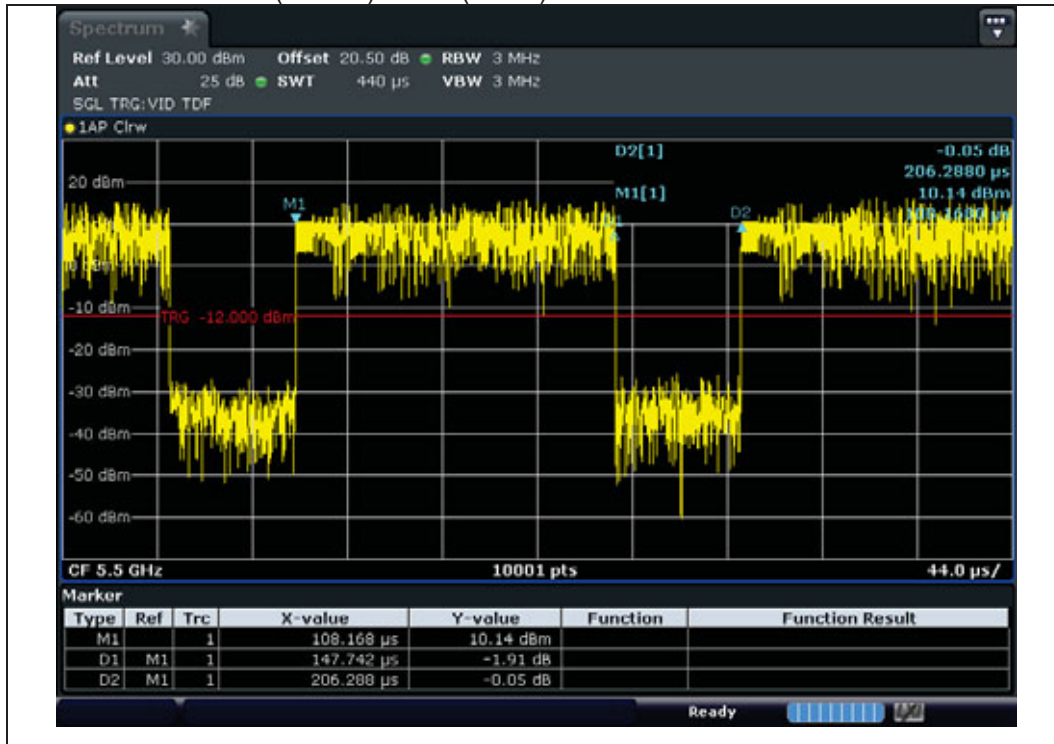
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.99$ dB

Test mode : 802.11n(HT40) / MIMO



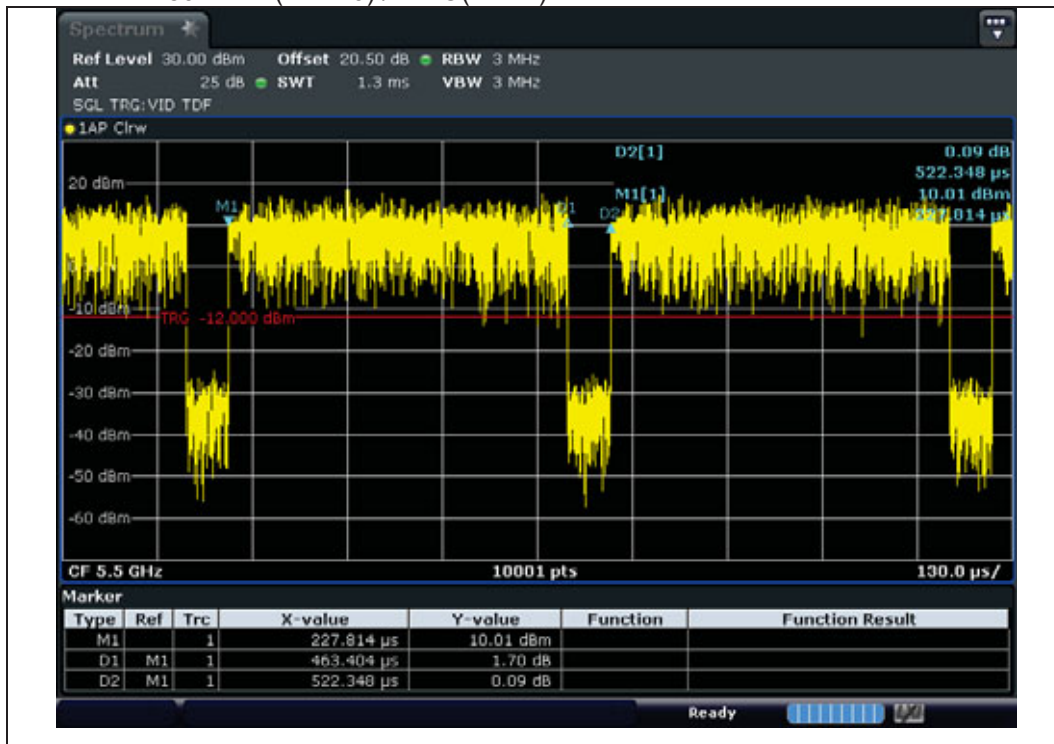
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 2.57$ dB

Test mode : 802.11ac(VHT20) / SISO(ANT1)



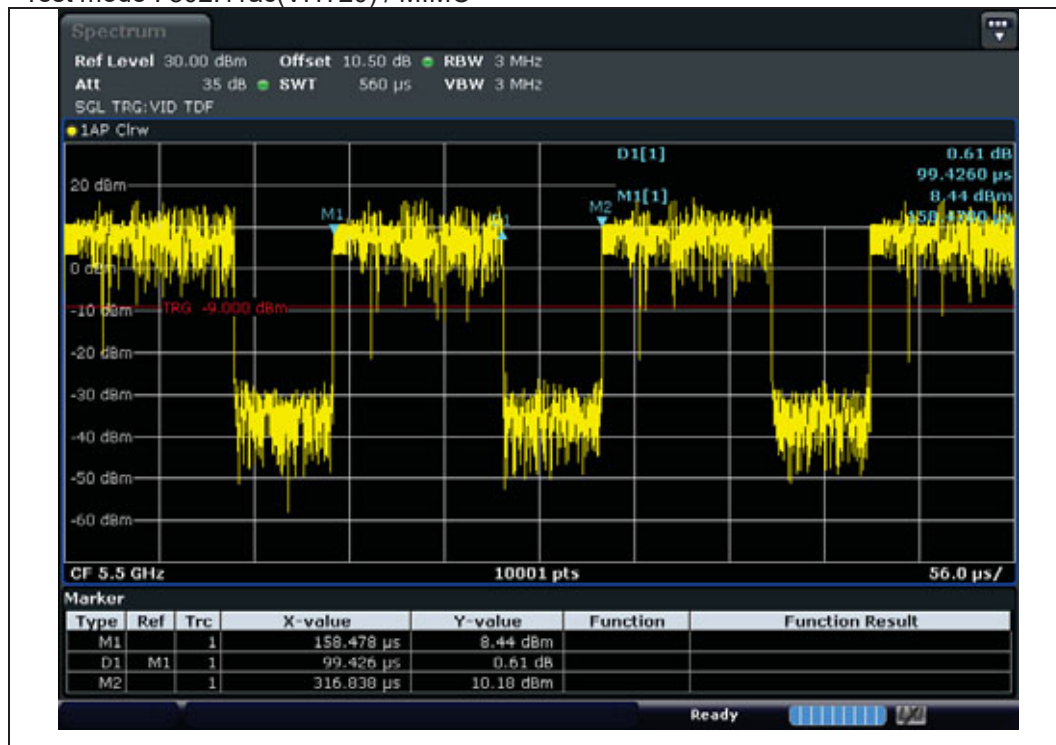
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.45$ dB

Test mode : 802.11ac(VHT20) / SISO(ANT2)



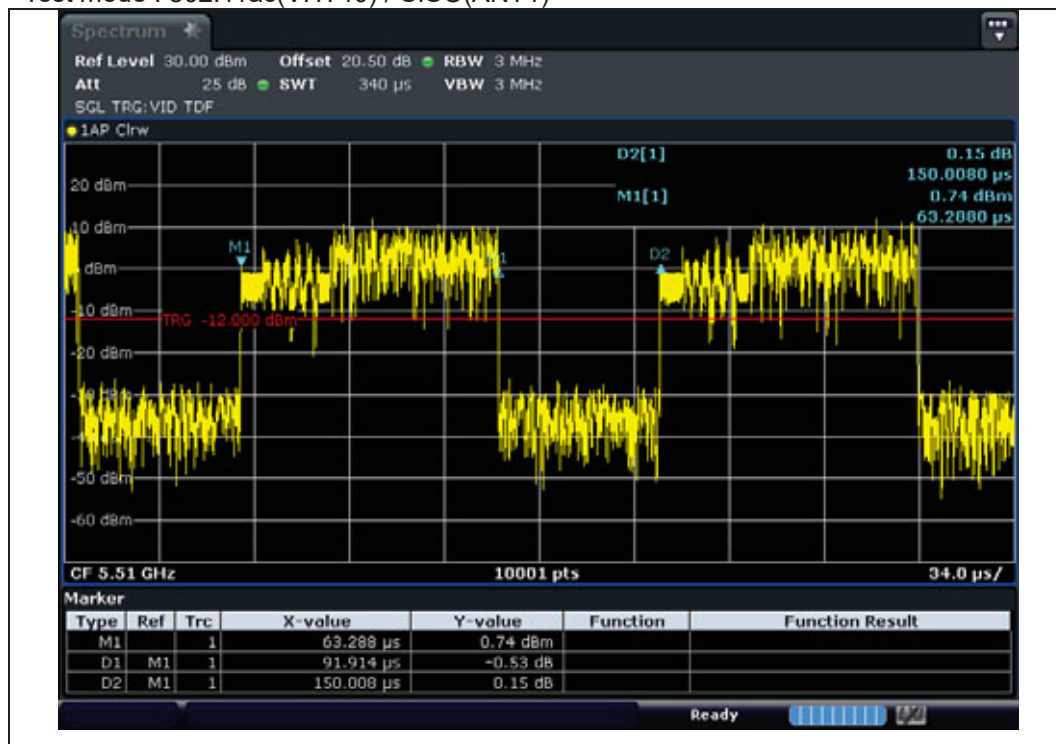
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.52$ dB

Test mode : 802.11ac(VHT20) / MIMO



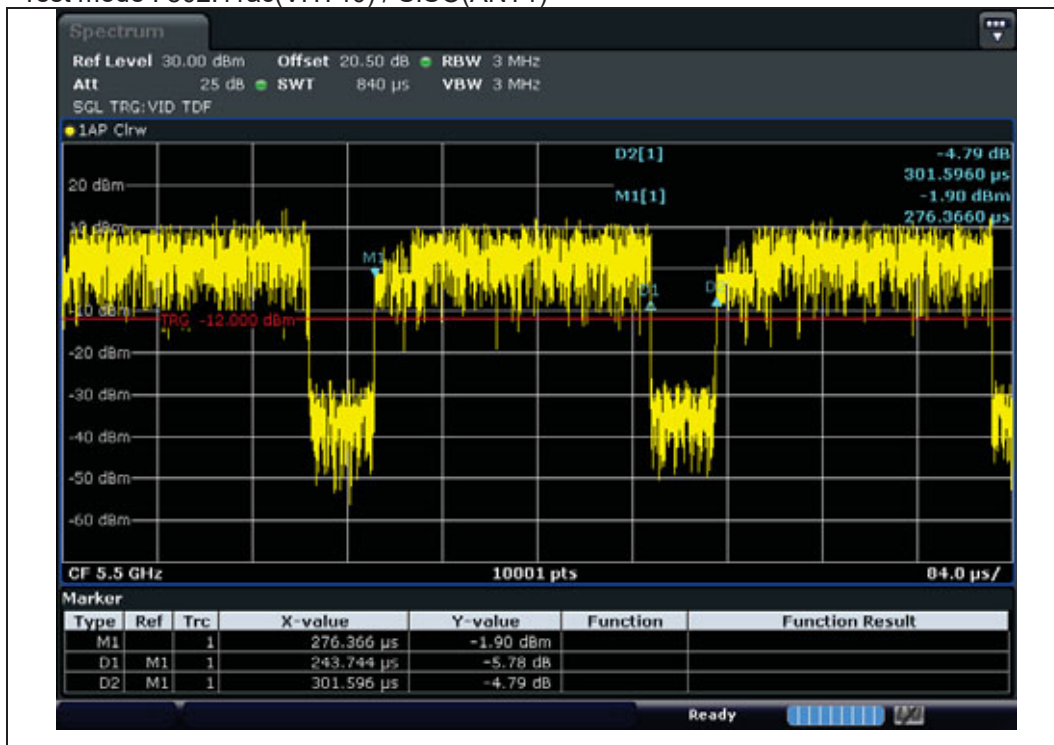
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 2.02$ dB

Test mode : 802.11ac(VHT40) / SISO(ANT1)



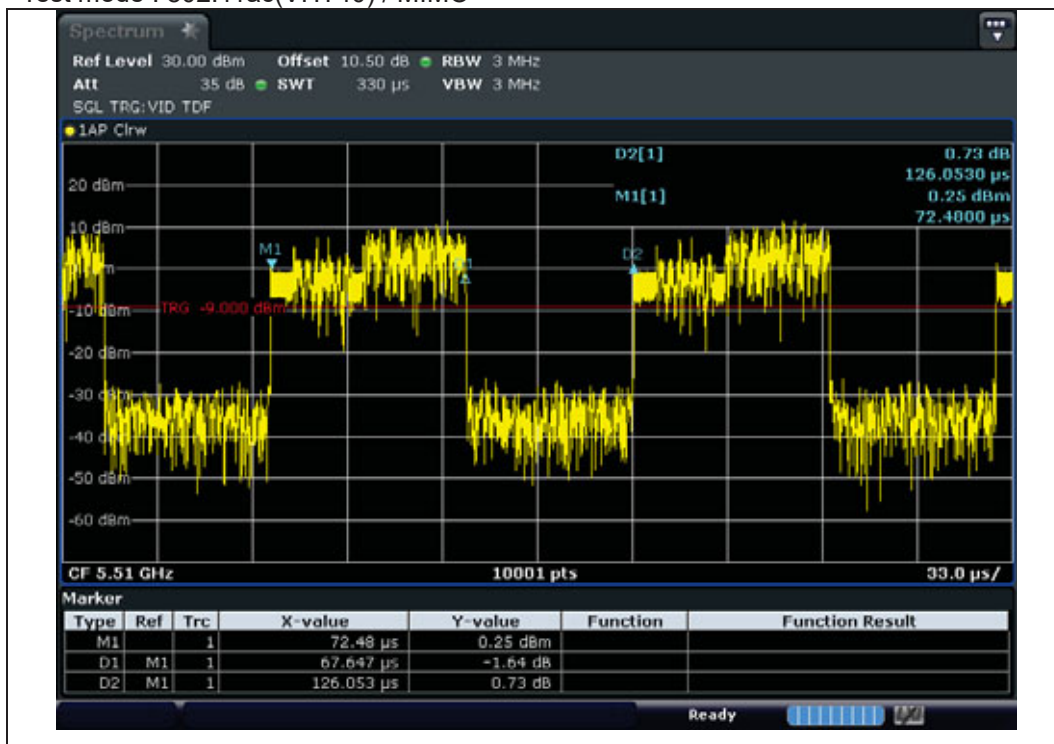
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 2.13$ dB

Test mode : 802.11ac(VHT40) / SISO(ANT1)



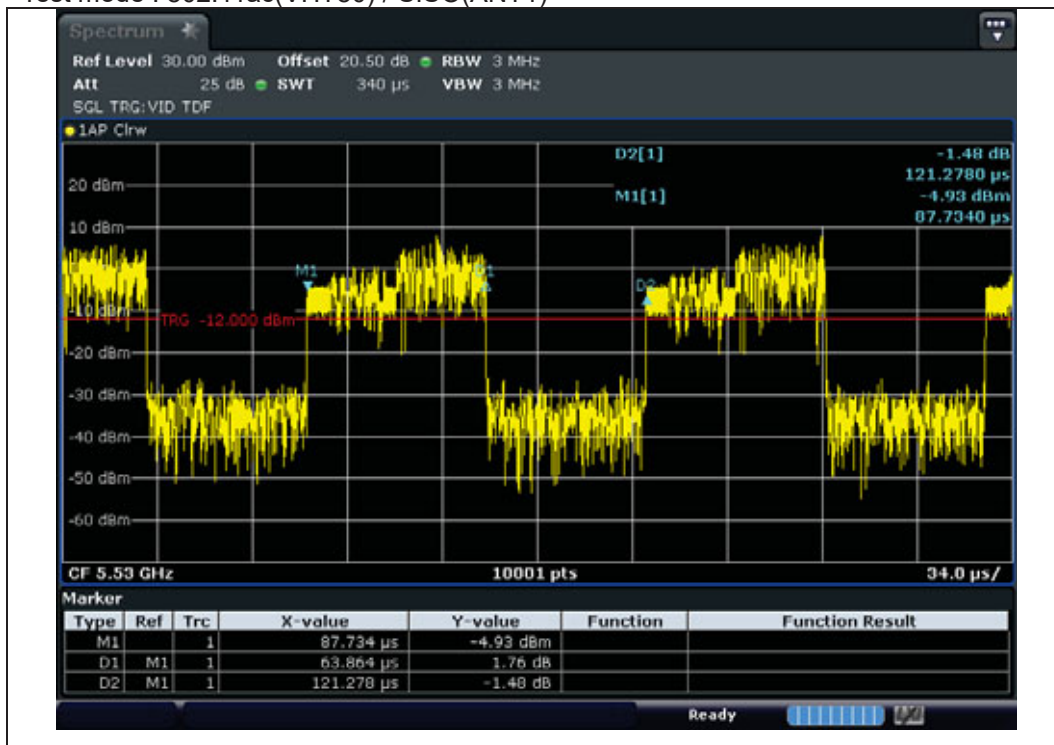
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 0.92$ dB

Test mode : 802.11ac(VHT40) / MIMO



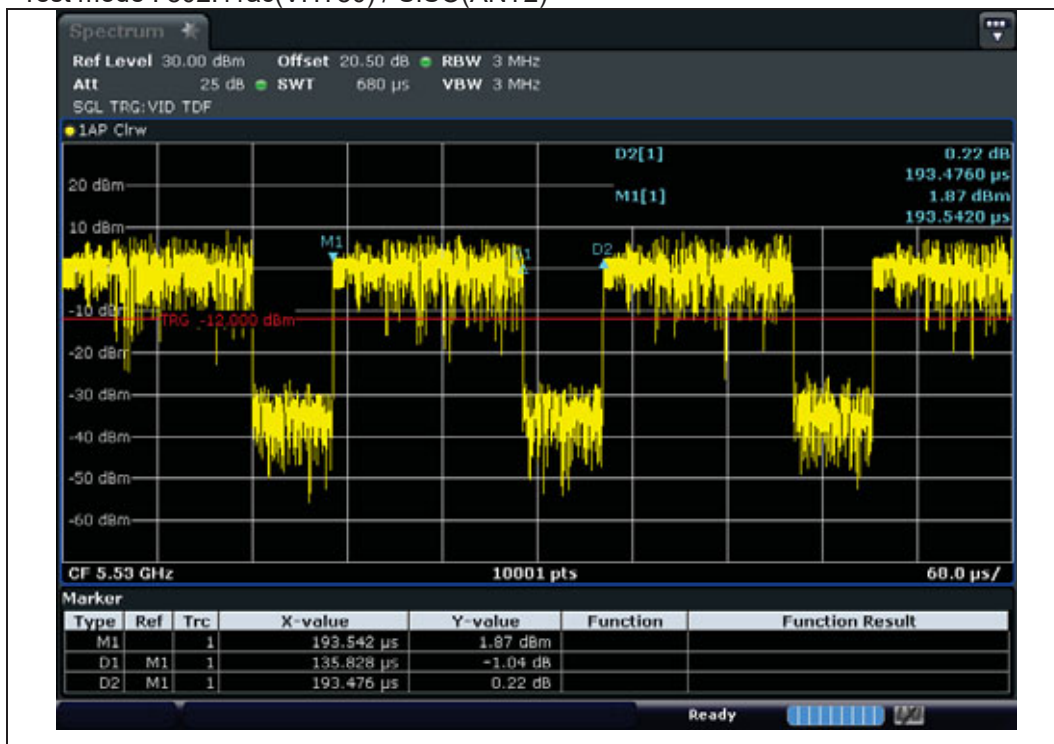
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 2.70$ dB

Test mode : 802.11ac(VHT80) / SISO(ANT1)



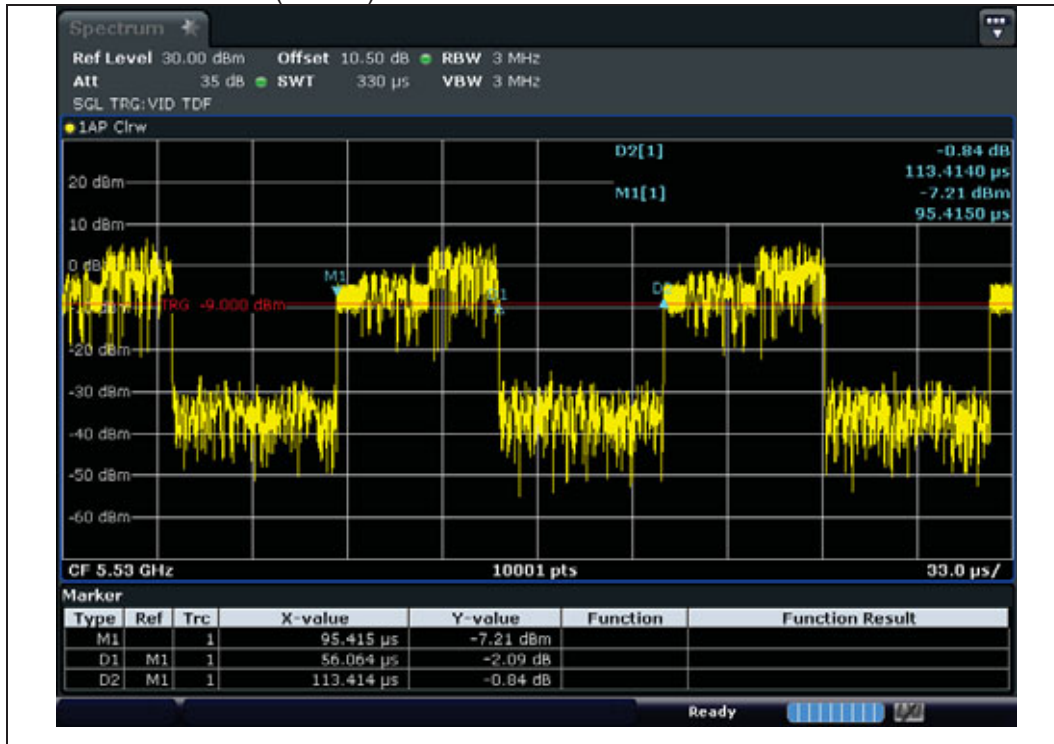
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 2.79$ dB

Test mode : 802.11ac(VHT80) / SISO(ANT2)



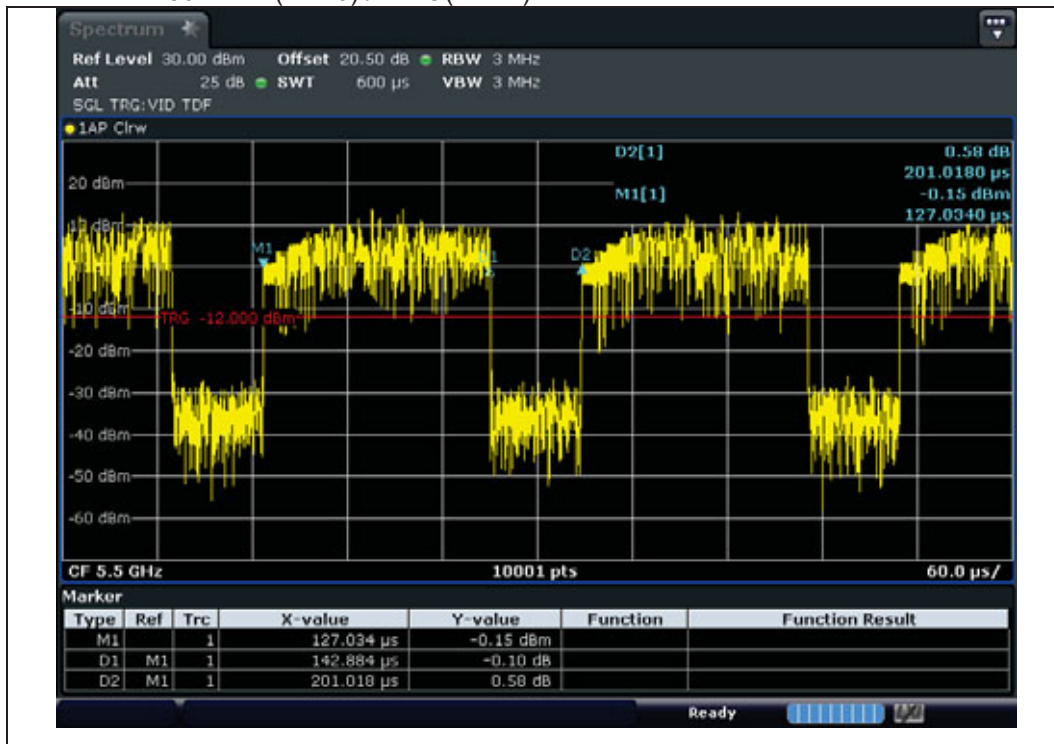
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.54$ dB

Test mode : 802.11ac(VHT80) / MIMO



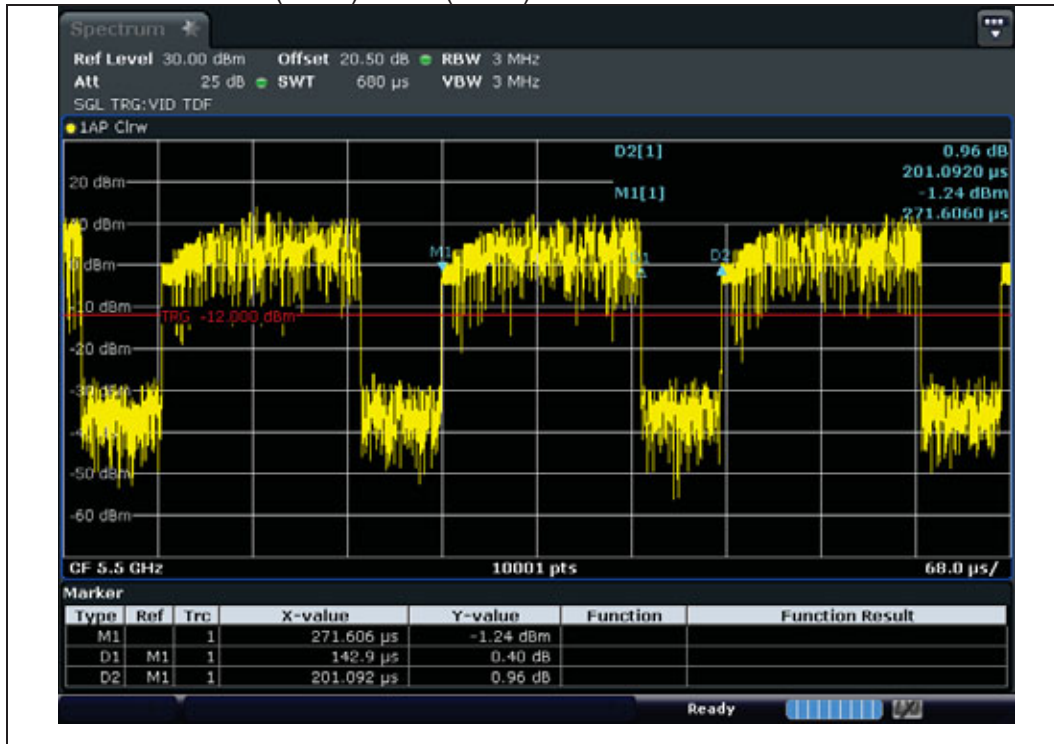
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 3.06$ dB

Test mode : 802.11ax(HE20) / SISO(ANT1)



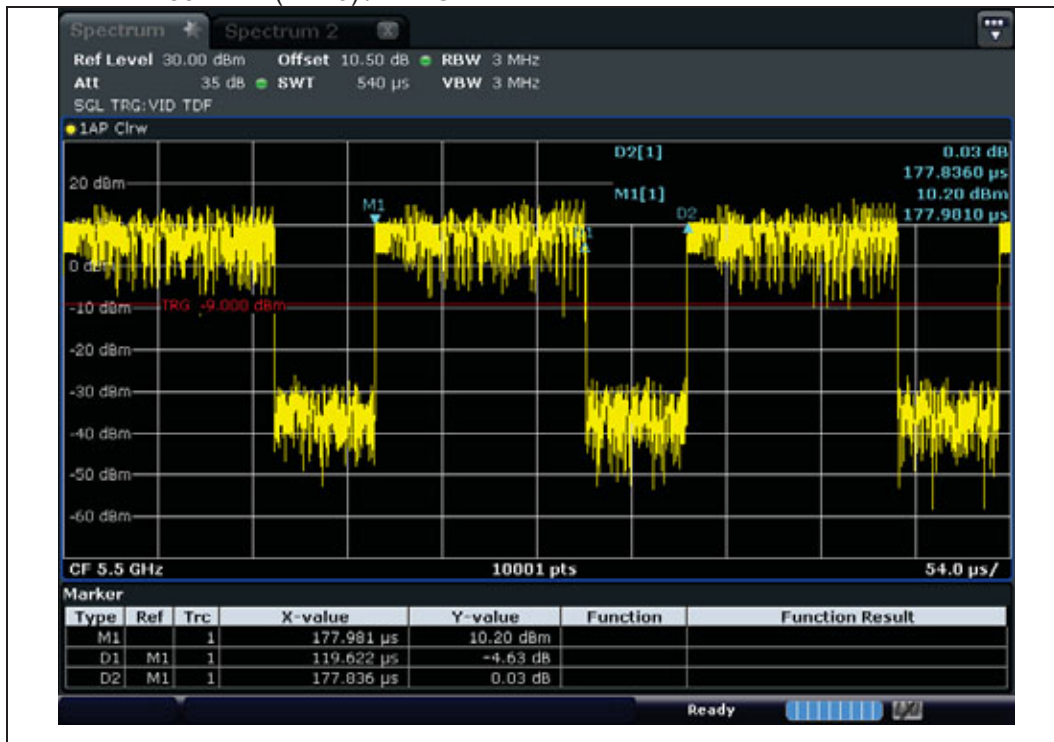
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.48$ dB

Test mode : 802.11ax(HE20) / SISO(ANT2)



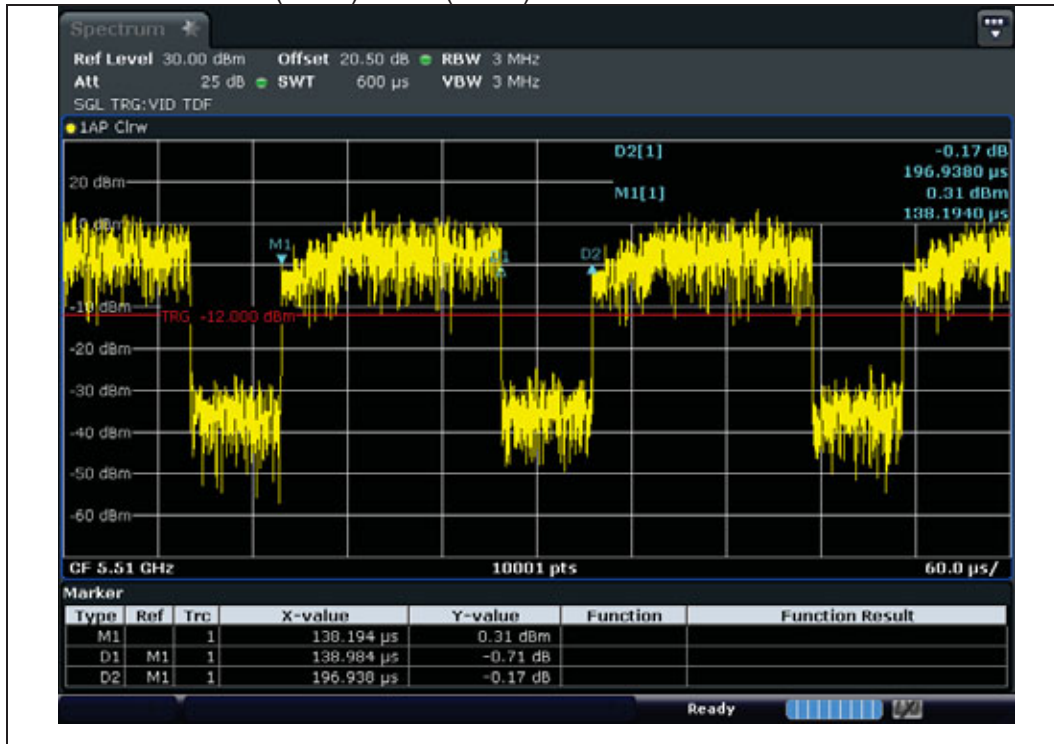
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.48 \text{ dB}$

Test mode : 802.11ax(HE20) / MIMO



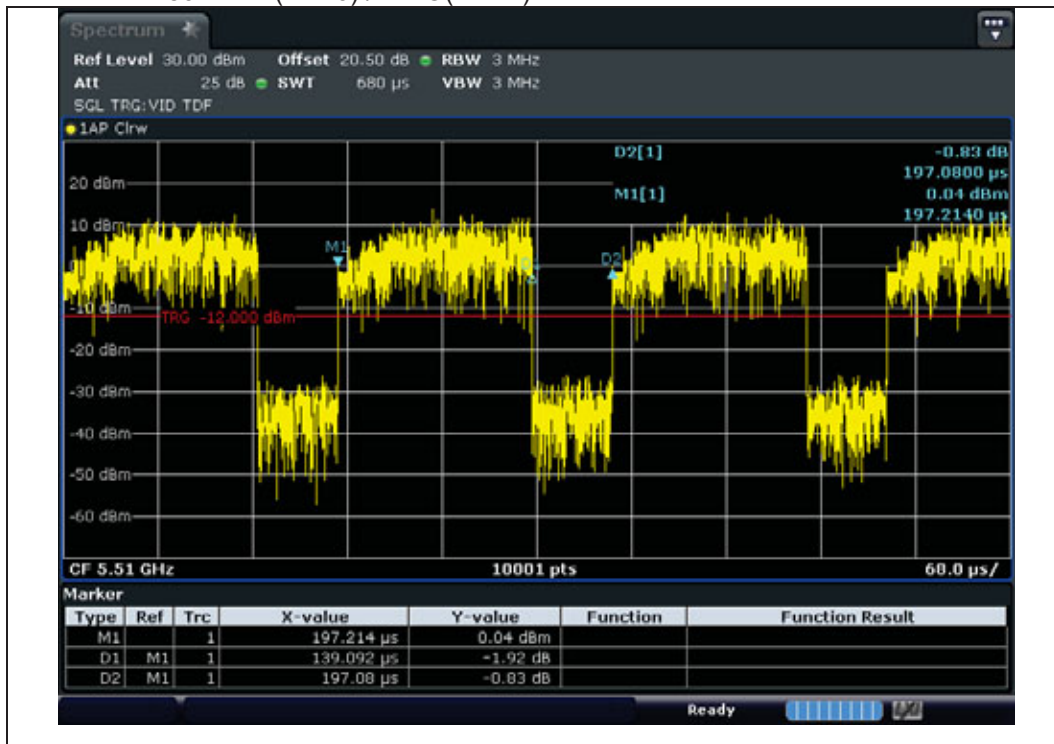
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.72 \text{ dB}$

Test mode : 802.11ax(HE40) / SISO(ANT1)



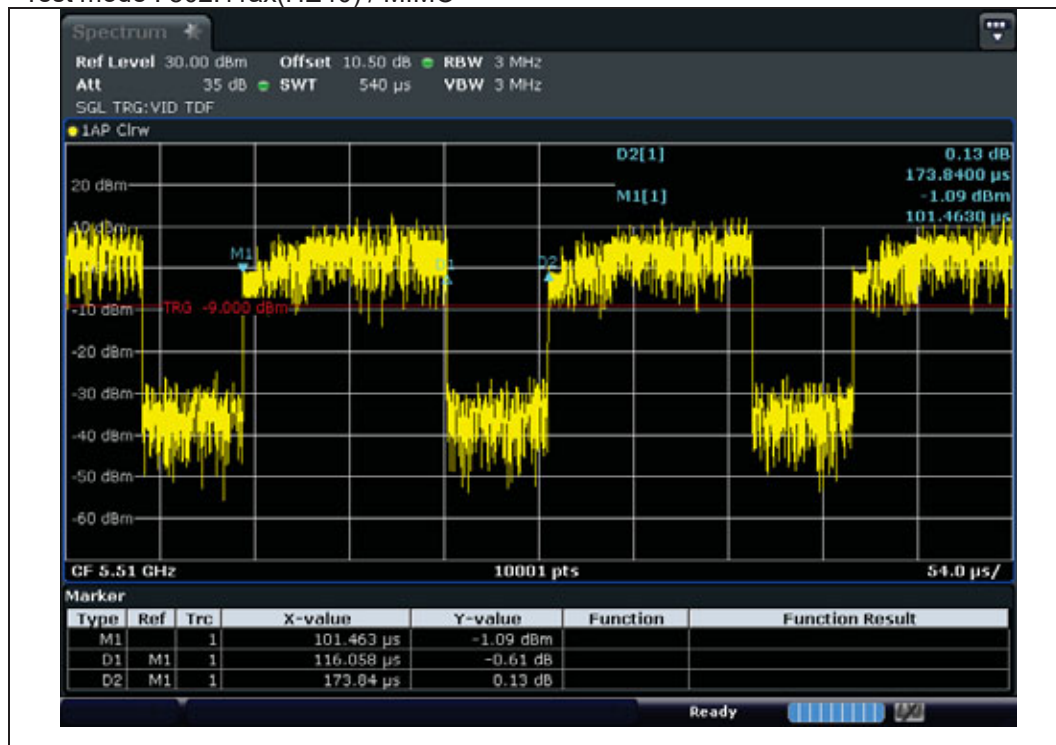
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.51$ dB

Test mode : 802.11ax(HE40) / SISO(ANT2)



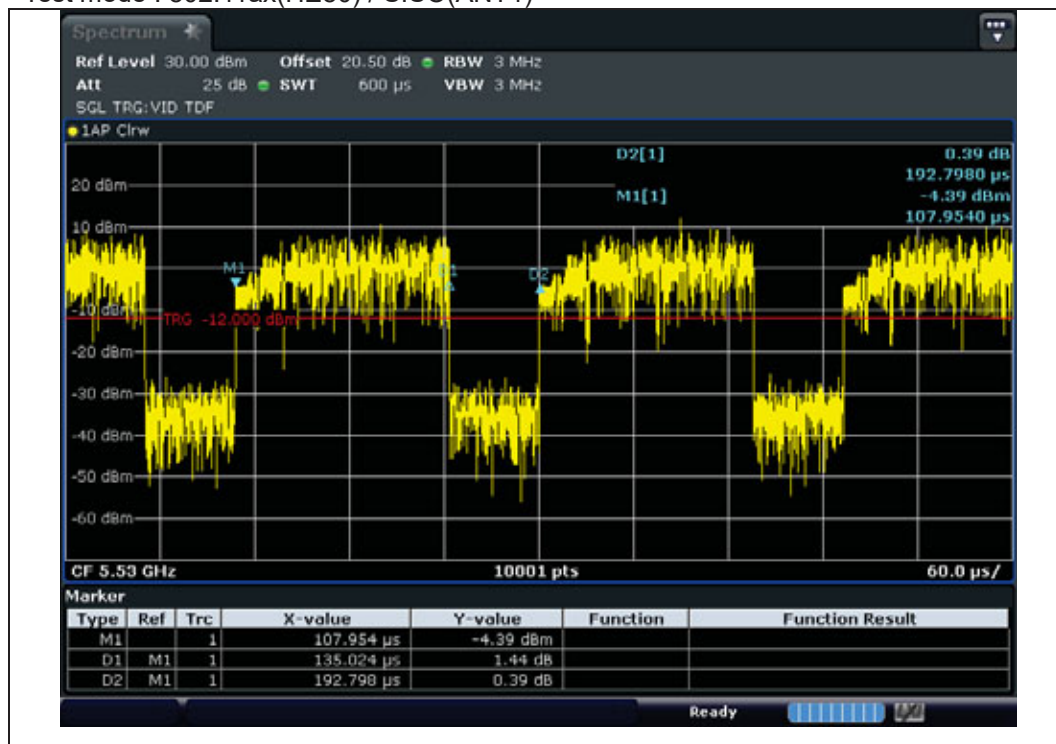
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.51$ dB

Test mode : 802.11ax(HE40) / MIMO



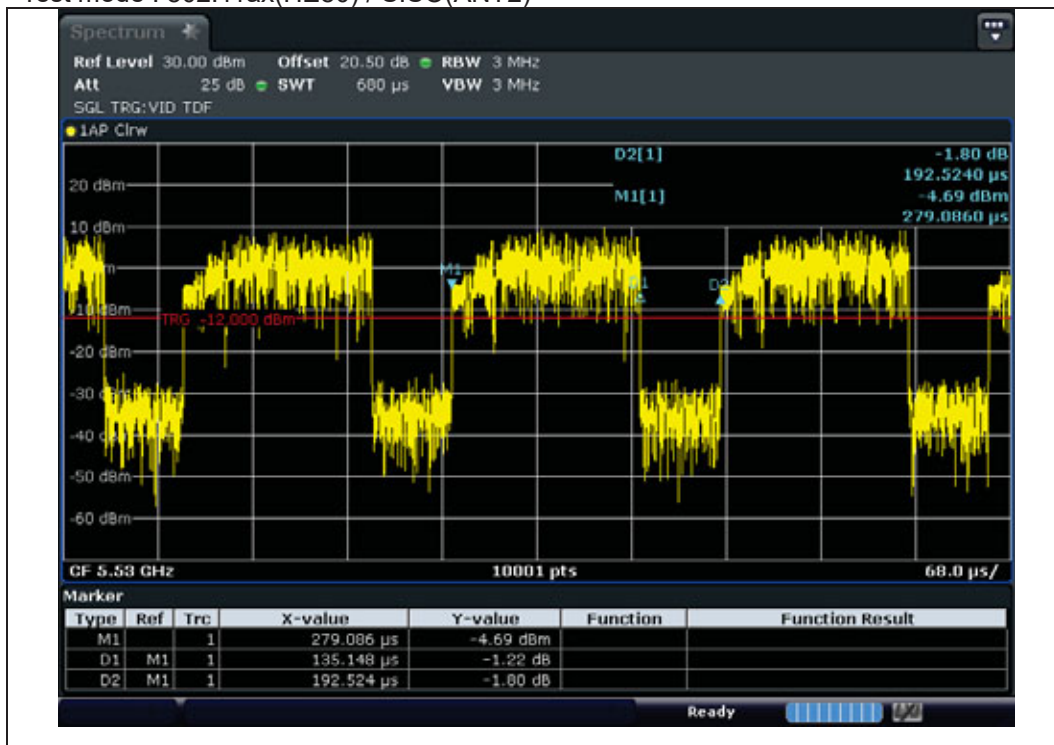
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.75$ dB

Test mode : 802.11ax(HE80) / SISO(ANT1)



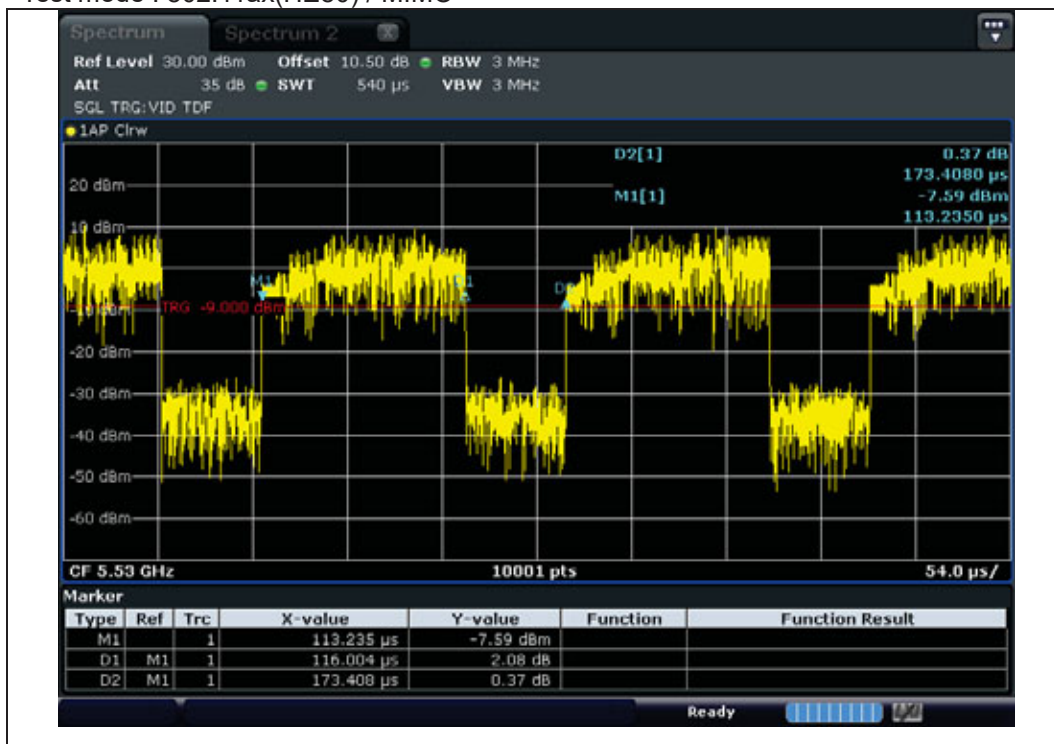
Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.55$ dB

Test mode : 802.11ax(HE80) / SISO(ANT2)



Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.54$ dB

Test mode : 802.11ax(HE80) / MIMO



Average factor(dB) : $10\log(\text{ontime}/\text{period}) = 1.75$ dB

4.3.7 Conducted Emission

4.3.7.1 Regulation

According to §15.207(a), and RSS-GEN 8.8 for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

According to §15.107(a), for unintentional device, except for Class A digital devices, line conducted emission limits are the same as the above table.

4.3.7.2 Measurement Procedure

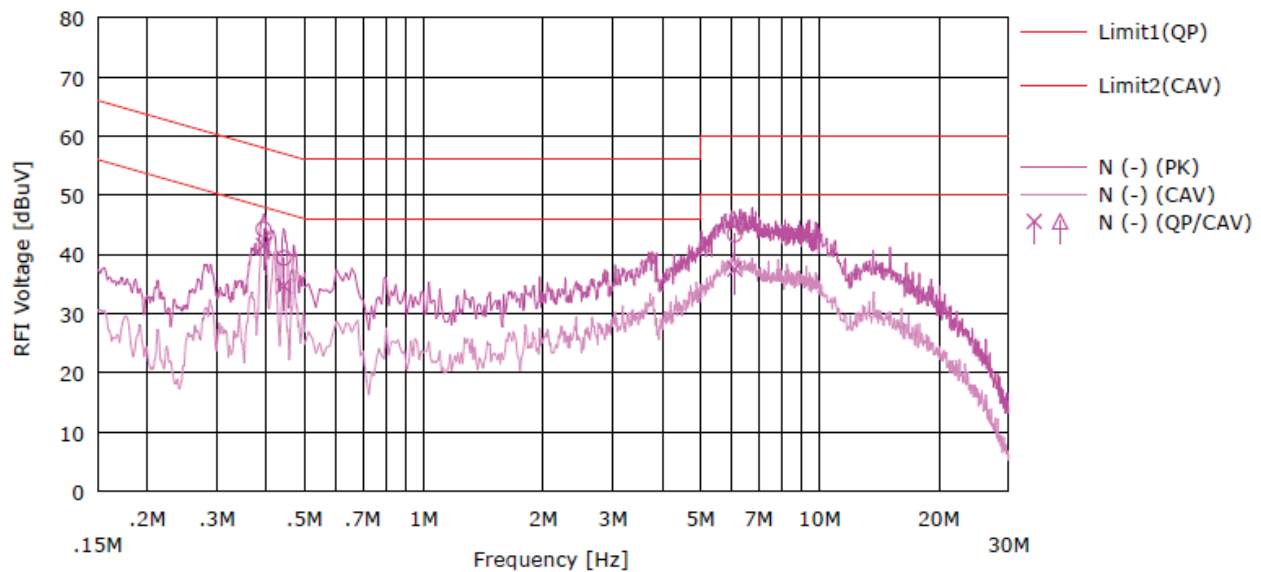
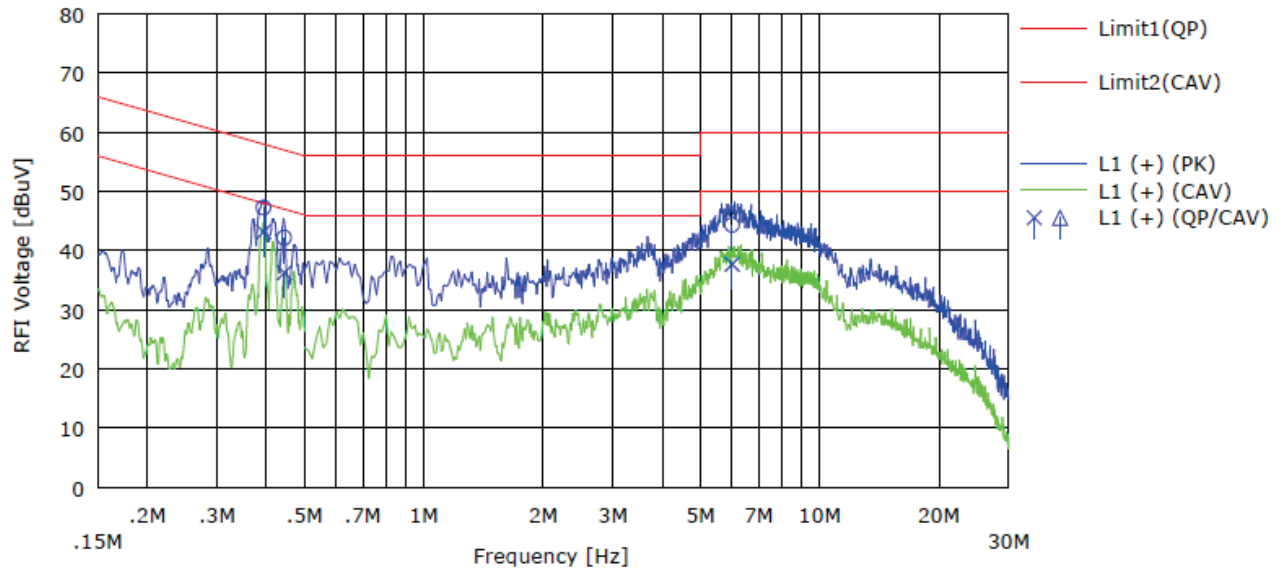
- 1) The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm away from the vertical wall and 1.5 m away from the side wall of the shielded room.
- 2) Each current-carrying conductor of the EUT power cord was individually connected through a 50 Ω /50 μ H LISN, which is an input transducer to a Spectrum Analyzer or an EMI/Field Intensity Meter, to the input power source.
- 3) Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
- 4) The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.
- 5) The measurements were made with the detector set to PEAK amplitude within a bandwidth of 10 kHz or to QUASIPeak and AVERAGE within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

4.3.7.3 Result

Comply (measurement data : refer to the next page)

4.3.7.4 Measurement data

Test mode : 2.4GHz(802.11ax(HE40)) / MIMO_2452 MHz) + 5GHz(802.11n(HT20)) / MIMO_5825 MHz



NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.39330	37.2	33.2	10.0	47.2	43.2	58.0	48.0	10.8	4.8	L1 (+)
2	0.44349	32.1	26.2	10.0	42.1	36.2	57.0	47.0	14.9	10.8	L1 (+)
3	6.00471	34.2	27.6	10.1	44.3	37.7	60.0	50.0	15.7	12.3	L1 (+)
4	0.39324	34.3	31.5	10.0	44.3	41.5	58.0	48.0	13.7	6.5	N (-)
5	0.44284	29.4	24.6	10.0	39.4	34.6	57.0	47.0	17.6	12.4	N (-)
6	6.10197	33.3	27.4	10.1	43.4	37.5	60.0	50.0	16.6	12.5	N (-)

APPENDIX I

TEST EQUIPMENT USED FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

Equipment	Manufacturer	Model	Serial No.	Cal. Date (yy.mm.dd)	Next Cal.Date (yy.mm.dd)
FSV Signal Analyzer	ROHDE&SCHWARZ	FSV30	103370	2021-10-14	2022-10-14
FSV Signal Analyzer	ROHDE&SCHWARZ	FSV40	101010	2021-04-20 / 2022-04-18	2022-04-20 / 2023-04-18
Power Sensor	KEYSIGHT	U2022XA	MY55320008	2021-08-17	2022-08-17
ATTENUATOR	INMET	26A-20	TR010	2021-10-12	2022-10-12
Power Supply	KIKUSUI	PWX1500L	SM002050	2021-08-24	2022-08-24
Digital MultiMeter	HP	34401A	US36025428	2022-01-10	2023-01-10
Signal Generator	ROHDE&SCHWARZ	SMB100A	178384	2021-10-13	2022-10-13
EMI Test Receiver	ROHDE&SCHWARZ	ESU40	100445	2021-09-10	2022-09-10
BiLog Antenna	Schwarzbeck	VULB9168	00821	2021-03-31	2023-03-31
ATTENUATOR	JFW	50F-006	6 dB-3	2021-04-22 / 2022-04-13	2022-04-22 / 2023-04-13
Preamplifier	TSJ	MLA-10k01-b01-27	1870367	2021-04-21 / 2022-04-13	2022-04-21 / 2023-04-13
Antenna Mast(10 m)	TOKIN	5977	-	-	-
Antenna Mast(10 m)	Innco	MA4640-XPET-0800	578	-	-
Controller(10 m)	TOKIN	5909L	141909L-1	-	-
Controller(10 m)	Innco	CO3000	40040217	-	-
Turn Table(10 m)	TOKIN	5983-1.5	-	-	-
Active Loop H-Field	ETS	6502	00150598	2021-05-25	2023-05-25
Double Ridege Horn Antenna	ETS	3117	00168719	2021-08-23	2022-08-23
Double Ridege Horn Antenna	A.H Systems, Inc	SAS-574	465	2021-04-26	2023-04-26
PREAMPLIFIER	Agilent	8449B	3008A02110	2022-01-10	2023-01-10
PREAMPLIFIER	A.H Systems, Inc	PAM-1840VH	166	2022-01-10	2023-01-10
High pass filter	Wainwright Instruments GmbH	WHNX6-5840-8000-26500-60CC	4	2022-01-10	2023-01-10
EMI Test Receiver	ROHDE&SCHWARZ	ESR7	102160	2021-06-14	2022-06-14
LISN	ROHDE&SCHWARZ	ENV216	101416	2021-06-14	2022-06-14
Pulse Limiter	KYORITSU	TFL-007D	12-19-121	2021-06-14	2022-06-14
EMI test receiver	ESW44	R&S	101839	2021-06-14	2022-06-14
Horn antenna	BBHA 9120 D	Schwarzbeck	02067	2021-06-02	2022-06-02

Controller	C3000	Innco	45450119	-	-
Antenna mast	MA4640-XP-ET	Innco	-	-	-
Turn table	-	-	-	-	-
Band Reject Filter	WRCGV10-2363.5- 2400-2483.5-2520-- 60SS	wainwright instruments gmbh	7	2021-04-21 / 2022-04-14	2022-04-21 / 2023-04-14